

**THE UNIVERSITY OF BRITISH COLUMBIA**  
***Curriculum Vitae for Faculty Members***

1. **SURNAME:** Christensen **Date:** July 19, 2010 **Initials:** VC  
**FIRST NAME:** Villy **MIDDLE NAME(S):**
2. **DEPARTMENT/SCHOOL:** Fisheries Centre
3. **FACULTY:** College for Interdisciplinary Studies
4. **PRESENT RANK:** Associate Professor **SINCE:** July 2004
5. **POST-SECONDARY EDUCATION**

University or Institution	Degree	Subject Area	Dates
University of Copenhagen	Ph.D.	Ecosystem Modelling	June 1992
University of Copenhagen	Cand scient. (II)	Marine Biology	1978.7-1980.10
University of Aarhus	Cand. scient. (I, II)	Biology w/mathematics	1973.9-1978.7

**Title of Dissertation and Name of Supervisor**

Network analysis of trophic interactions in aquatic ecosystems.

Professor Sven Erik Jørgensen

**Special Professional Qualifications**

I work with ecosystem modeling and have a background in fisheries research. My research focus has since 1990 been centered on understanding how human exploitation impacts marine ecosystems, and utilizes ecosystem modeling as the main tool. As part of this I have been central to the development and dissemination of the Ecopath with Ecosim (EwE) approach and software, and have through cooperation with scientists worldwide gained considerable knowledge on trophic dynamics of aquatic resources. I have led a large number of training courses and workshops throughout the world, centered on developing ecosystem approaches to fisheries management. Ecopath modeling is the de-facto standard for ecosystem approaches to fisheries management, and is being applied throughout the world. There are more than 400 derived models and publications, more than 6000 registered users in 155 countries, and more than seventy degrees using this form for modeling as a central element have been awarded at universities globally.

- 2006 - Leading development of new EwE6, including coupling to 3D-gaming engine for visualization, design of decision-support system, single-player games, and videos
- 2004 - Developing methodology for database-driven ecosystem model generation; applied to all the world's large marine ecosystems (Christensen et al. 2008)
- 2002 - Developing the EcoOcean model used for global environmental assessment as part of the UNEP GEO-4: Environment for Development, the International Assessment of Agricultural Science and Technology Assessment (Ag IAASTD), the OECD Environmental Outlook, and the Millennium Ecosystem Assessment
- 2001-3: Developed methodology for quantification of how fish biomass and exploitation pressure has changed regionally; applied to the North Atlantic, West Africa, and the South China Sea (Christensen et al., 2003, 2004, 2003). Plots used by Dr Sylvia Earle for her 2009 TEDPrize acceptance speech.
- 1998: Co-author of "fishing down marine food webs" (Pauly et al. 1998)
- 1996: First published description of 'fishing down the food web' (Christensen 1996)
- 1995: First quantification of ecosystem maturity (Christensen 1995), since then applied and elaborated further by many researchers
- 1995: Co-author of "primary production required to sustain global fisheries" (Pauly & Christensen 1995)
- 1993: Published description of 'primary production required for fisheries' (Christensen & Pauly 1993)

- 1992: Published description of Ecopath II (Christensen & Pauly 1992). This paper was recognized by Ecological Modelling in Dec 2008 as the third-most cited paper in the journal (out of 5020).
- 1991: Evaluation of fisheries potential for tropical and subtropical areas globally (Christensen et al. 1991)
- 1990: Project leader for Ecopath development since 1990

## 6. **EMPLOYMENT RECORD**

### (a) *Prior to coming to UBC*

University, Company or Organization	Rank or Title	Dates
International Center for Living Aquatic Resources Management	Program leader	1998-1999
ICLARM	Senior scientist	1993-1998
ICLARM	Associate scientist	1990-1992
Danish Institute for Fisheries and Marine Research	Assistant head	1988-1989
DIFMAR	Fisheries biologist	1980-1987

I worked for 8 years at the Danish Institute for Fisheries Research, (a research and management institution of the Ministry of Fisheries) at what was the highest non-administrative rank in the organization, and finally as Assistant Department Head of Research. At ICLARM (an international research institution affiliated with the CGIAR/World Bank and now named WorldFish Center), I was recruited as an associate scientist, and promoted to senior scientist after three years, (at the time the highest non-administrative rank). My final years with ICLARM were as program leader, responsible for the Fisheries Program with a staff of 15-20 and a million dollar budget.

### (b) *At UBC*

Rank or Title	Dates
Associate Director, Fisheries Centre	2009–
Associate Professor, College for Interdisciplinary Studies, Fisheries Centre	2007–
Faculty Affiliate, Centre for Digital Media, Great Northern Way Campus	2009–
Faculty Associate, Dep. of Zoology	2005–
Faculty Associate, Inst. For Resources, Environment and Sustainability	2005-2008
Associate Professor, Graduate Studies, Fisheries Centre	2004-2006
Senior Research Fellow	2001-2004
Visiting Scientist	1999-2001
Adjunct Professor, Fisheries Centre	1996-2001

### (c) *Date of granting of tenure at U.B.C.: 1 July 2004*

## 7. **LEAVES OF ABSENCE**

University, Company or Organization at which Leave was taken	Type of Leave	Dates

## 8. **TEACHING**

### (a) *Areas of special interest and accomplishments*

Danida, the Danish Development Agency, initially funded my position at ICLARM and my main term of reference was to develop methodologies for multispecies assessment of fisheries resources in developing countries, to disseminate these methodologies and support their application through training activities. The focus of my work was capacity building, and I worked very closely with a large number of developing country researchers throughout my time with ICLARM. As part of my work I have conducted numerous training

courses, hosted many visiting scientists/students, and dedicated considerable effort to editing publications from collaborators. I have headed a major capacity building activity for the European Union involving scientists from 31 institutions in Europe, Central and South America, the Caribbean, and Africa, collaborating on ecosystem approaches to fisheries management through a series of training courses leading to a major international symposium as well as supported several other such initiatives. My teaching has over a decade thus been focused on capacity building, with emphasis on training young scientists in developing countries.

*(b) Courses Taught at UBC*

I have given 3-8 hours of lectures/tutorials per year in the UBC FC graduate program between 1999 and 2004 when joining the faculty. I have also given more than 30 training courses and training workshops at UBC and elsewhere [listed below under “(f) other”]. As project-funded, teaching of regular session courses was not a part of my terms of reference prior to 2004.

Session	Course Number	Scheduled Hours	Class Size	Hours Taught			
				Lectures	Tutorials	Labs	Other
2010-W	Zoology 502	2	6	2			
2009-F	ENVR 200	2	48	2			
2009-W	Fish 501	48	10+3 unofficial	26	15	10	
2006-W	EOS 478	1	24	1			
2006-F	Fish 501	36	9 + 14 unofficial	34		25	
2005-W	EOS 478	1	36	1			
2004-F	Fish 501	36	4 + 8 unofficial	18	18		
2003-W	Fish 501	36	8	36			

*Training Courses Taught at UBC*

Session	Course/organizer Topic	Scheduled Hours	Class Size	Hours Taught	
				Lectures	Tutorials
2009-S	Ecosystem modeling advanced training workshops, 2-3 Sep. (Coordinator and lecturer). Fee-based	16	46 from 18 countries	10	6
2009-S	Ecosystem modeling, introductory training course, 26-28 Aug. (Coordinator and lecturer). Fee-based	26	37 from 16 countries	13	13
2004-S	Ecopath with Ecosim training course, 10-14 May, UBC, Vancouver. Activity of the 4 <sup>th</sup> World Fisheries Congress. (Coordinator and lecturer). Fee-based	40	31 from 16 countries	24	16
2002-W	FIAS/TrawlBase Ecosim Training Workshop, 15-25 Jan. (Lecturer) European Union	60	7 from 5 countries	20	40
2000-F	EwE Training Course, 6-10 Nov. UBC. (Coordinator and lecturer) Fee-based	40	31 from 12 countries	32	8
1999-F	EwE Training Course, 22-25 Nov, UBC, Vancouver, (Coordinator and lecturer)	40	24 from 4 countries	32	8

*(c) Graduate Students Supervised and/or Co-Supervised*

Student Name	Program type	Year		Principal Supervisor	Co-Supervisor(s)
		Start	Finish		
Aaron Greenberg (Zool.)	Ph.D.	2010.9			
Rachel Chudnow (Zool.)	M.Sc.	2010.9			
Audrey Valls (Zool.)	Ph.D.	2010.3		Villy Christensen	
Shawn Booth (Environ. & Manag., Royal Roads)	M.Sc.	2010.1		Villy Christensen	
Jeroen Steenbeek (Vrije Universiteit Amsterdam)	M.Sc.	2009.9		Villy Christensen (scientific)	Jasper Dekker, (administrative)
Stephen Smikle, Univ. of West Indies, Jamaica	Ph.D.	2006		Karl Aiken, UWI	Villy Christensen
Michael Melnychuk (Zool.)	Ph.D.	2005	2009.12	Carl Walters	Villy Christensen
Robert Ahrens (Zool.)	Ph.D.	2004	2010.3	Villy Christensen	Carl Walters
Sherman Lai	M.Sc.	2005.9	2008.4	Kellogg Booth	Villy Christensen
Chiara Piroddi (Zool.)	M.Sc.	2005.9	2008.2	Villy Christensen	
Dave Preikshot (RMES)	Ph.D.	2002	2007	Villy Christensen (since 2004)	Daniel Pauly

*Supervision of visiting students/researchers*

Name	Program	Visit period		Affiliation
		Start	Months	
Marta Coll, Ph.D.	Post Doc	2009.9	3½	Dalhousie University/Inst of Marine Science, Barcelona
Stephen Smikle	Ph.D. student	2009.9	5	Univ. of West Indies, Mona Campus, Jamaica
Brian Langseth	Ph.D. student	2009.8	1½	Michigan State University
Chris Brown	Ph.D. student	2009.8	2	Univ. of Queensland, Australia
Mark Hepburn	Ph.D. student	2009.6	3	CSIRO, Hobart, Australia
Gabriela Vera	Ph.D. student	2008.12	5	Universidade de São Paulo. Int. Oceanográfico
Marta Coll, PhD	Post Doc	2008.4.9	2	Dalhousie Univ.
Maria Villanueva, PhD	Post Doc	2008.3	1½	IFREMER, France
Kelly Kearney	Ph.D. student	2007.1.8	¾	Princeton University
Maria Villanueva, PhD	Post Doc	2006.11	1	IFREMER, France
Maddy Sigrist	Visiting scient.	2006.10	½	NOAA Chesapeake Bay
Fabián A. Rodríguez	Ph.D. student	2005.9	2	Cinvestav-Mérida, Yucatán, México
Pi-Jen Liu	Ph.D. student	2004.11	12	Univ. of Chung Hsing, Taiwan
Maria Villanueva	Ph.D. student	2003.12	2	Ecole National Supérieure Agronomique de Toulouse, France
Simone Libraletto	Ph.D. student	2003.9	6	Univ. of Venice, Italy
Marta Coll	Ph.D. student	2003.8	4	Inst of Marine Science, Barcelona, Spain
Catherine Bulman, PhD	Visiting scient.	2003.4	1	CSIRO, Hobart, Tasmania
Simone Libraletto	Ph.D. student	2002.3	4	Univ. of Venice, Italy
Chiara Piroddi	B.Sc. student	2002.3	5	Thethys Research Institute, Italy
Sonia Rodríguez Ruiz	Ph.D. student	2000.8	4	Universidad de Alicante, Spain

*Supervision of Research Associates/Post-Docs/Research Assistants*

Name	Category	Period		Activity
		Start	Finish	
Dalai Felinto	M&P	2010.3		3D Gaming/visualization

Susana Cárdenas	RA/student	2010.1		Towards ecosystem-based management of the Peruvian anchovy fishery
Robert Ahrens	Post Doc	2009.11		Global Biodiversity Outlook (2 yr funding)
Lewis Nicolle	Game designer (part-time)	2009.6		3D Gaming/visualization
Chendursundaran Kamaragurubaran	Computer Engineer (part-time to May 09, full-time since)	2008.10 2007.10	2010.3 2007.12	AERL Scenario Lab Development; Ecopath Online concept; Lenfest Ocean Futures
Mike C Pan	Student (B.Eng.), full time summers, part time in semesters	2008.5	2010.3	3D Gaming/visualization
Chiara Piroddi	M&P B	2008.3		Ecosystem modeling; Peruvian anchovy
Carie Hoover	Ph.D. student (part-time)	2007.3		Program testing, Lenfest Ocean Futures
Jeroen Steenbeek	Consultant programmer	2006.1		Programming of Lenfest Ocean Futures
Joe Buszowski	Consultant programmer (3/4 time)	2005.10		Programming of Lenfest Ocean Futures
Sherman Lai	Team leader, computer scientist (M&P D)	2003.8		Development of ecosystem modeling software, project planning and conduction
Stephen Danic	Game designer (part-time)	2009.5	2009.8	3D Gaming/visualization
Dalai Felinto	Intern (full-time)	2008.11 2008.5	2009.2 2008.8	3D Gaming/visualization
Joe PW Hui, Ph.D.	RA III, Programmer	2007.3	2008.12	Programming of Lenfest Ocean Futures
Ken Kwasnicki	Consultant programmer (pt-time)	2006.12	2008	Visualization of pine beetle attacks
Tony Einfeldt	B.Sc. student, work study (part time)	2007.10	2008.4	Population trend database
Robyn Forrest	Documentation (part-time, Ph.D. student)	2007.3	2008.10	Programming of Lenfest Ocean Futures
Jordan Beblow	RA II	2004	2008.2	Development of biomass trend database, global scenario modeling
Dr Sylvie Guénette	Research Associate	2006.6	2007.12	Global scenario modeling
Fang Gao	RA III, Programmer	2005.10	2007.9	Programming of Lenfest Ocean Futures
William Walters	Professional/Management A	2007.5	2007.9	Spatial modeling procedures
Lingbo Li	Student (DFO-funded)	2007.5	2007.7	Ecological risk assessment for transgenic salmon
Matt Richard	Intern (from Univ. of Dalhousie)	2006.5	2006.8	Global scenario modeling
Heather Keith	RA II	2006.1	2006.6	Modeling of global fishing effort
Walt Yao	B.Sc. student, work study (part time)	2005.9	2006.3	Programming for ecosystem modeling software
Laura Sunderland	BA student, work study (part time)	2004.9	2005.5	Description of ecosystem models for model database
Dr Sheila Heymans	Res. Associate	2003	2005.2	Modeling of Steller sea lion dynamics in the Aleutian Islands

Dr Sylvie Guénette	Res. Associate	2003	2005.2	Modeling of Steller sea lion dynamics in the eastern Gulf of Alaska
--------------------	----------------	------	--------	---

*Supervisory Committee Member for the following students (UBC unless otherwise noted):*

Student Name	Program type	Year		Principal Supervisor	Co-Supervisor(s)
		Start	Finish		
Kristy A. Lewis, Louisiana State University	Ph.D.	2010		Jim Cowan	
Lucas Brotz (EOS)	M.Sc.	2010		Daniel Pauly	Evgeny Pakhomov
Ed Gregr (RMES)	Ph.D.	2009		Kai Chan	
Maria Espinosa (RMES)	M.Sc.	2008		Kai Chan	
Mike Hawkshaw (Zool)	Ph.D.	2008		Carl Walters	
Jenny Selgrath	Ph.D.	2007		Amanda Vincent	
Steve McAdams	Ph.D.	2006		Carl Walters	
Brett van Porten	Ph.D.	2005		Carl Walters	
Leigh Gurney (UBC EOS)	Ph.D.	2005		Evgeny Pakhomov	
Brajgeet Bhathal	Ph.D.	2005		Daniel Pauly	
Anna Hall	Ph.D.	2004		Andrew Trites	
Colette Wabnitz	Ph.D.	2004	2010.4	Daniel Pauly	
Yvette Rizzo	Ph.D.	2001		Daniel Pauly	
Mike Hawkshaw	M.Sc.	2006	2008.8	Carl Walters	
Sergio Neira, U Cape Town	Ph.D.	2004	2008	Coleen Moloney	
Elizabeth Mohammed	Ph.D.	2000	Stopped	Daniel Pauly	
Pablo Trujillo	M.Sc.	2004	2007.8	Daniel Pauly	
Lyne Morisette	Ph.D.	2002	2007.9	Daniel Pauly	
Heather Keith	M.Sc.	2003	2006.3	Rashid Sumaila	Carl Walters
Michael Melnychuk	M.Sc.	2002	(2004)	Carl Walters	(Transferred to Ph.D.)
Katia de Freire	Ph.D.	1999	2005	Daniel Pauly	
Kristin Kaschner	Ph.D.	2000	2004	Daniel Pauly	Andrew Trites
Rik C Buckworth	Ph.D.	2002	2004	Carl Walters	
Andrea Coombs	M.Sc.	2001	2004	Andrew Trites	
Emma Bredesen	M.Sc.	2002	2003	Andrew Trites	
Stephen Watkinson	M.Sc.	2001	2002	Daniel Pauly	
Richard Stanford	M.Sc.	2001	2002	Tony Pitcher	
Steven Martell	Ph.D.	1999	2002	Carl Walters	
Alasdair Beattie	M.Sc.	1999	2001	Daniel Pauly	
Laura Vidal-Hernandez	M.Sc.	1999	1999	Daniel Pauly	

(d) *Continuing Education Activities*

(e) *Visiting Lecturer (indicate university/organization and dates)*

- 2011-: [Visiting Professor. Master of Fisheries Management Program. University of Las Palmas de Gran Canaria.]  
2001: Lecturer, Multispecies Fisheries Models, North Sea Centre, Hirtshals, Denmark, 1-10 August; international course for Ph.D. students organized by University of Copenhagen  
1993: Visiting Professor, teaching graduate course "Ecological Engineering and Modelling", 15-26 Feb. 1993, Asian Institute of Technology (AIT), Bangkok, Thailand.  
1992: Visiting Professor, graduate course "Ecological Engineering and Modelling", 25 Feb.-9 Mar. 1992, AIT, Bangkok, Thailand.

(f) *Other (\* indicates ecosystem modelling training courses where I have acted as course leader and lecturer; some of the courses are called 'workshops' below)*

- 2010: \* Using Ecosystem Modeling for Fisheries Management. International Council for Exploration of the Sea (ICES), Copenhagen, Denmark, March 8-12, course leader and lecturer; [27 participants from 16 countries].
- 2009: \* Modelación de Ecosistemas con la utilización del Program EwE impartio para Profesores-Investigadores y Estudiantes de Posgrado, llevado a cabo en la Unidad Mérida del CINVESTAV, 45 hours, April 20-24. 15 participants from throughout Mexico; course leader and lecturer.
- 2008: \* Coastal-Marine Ecosystem-Based Management Tools Training for South Pacific Practitioners, Magnetic Island, Queensland, Australia, August 29. [35 participants from the South Pacific]
- 2008: \* Modern Methods for Ecosystem Modelling: *EUR-OCEANS Summer School*, The Scottish Association for Marine Science, Dunstaffnage Marine Laboratory, Dunbeg, Oban, Scotland, June 30 – July 3, 24 Ph.D. students from 17 countries. Lecturer and resource person.
- 2008: \* EwE6 training course, WorldFish & IRRI, Los Baños, Philippines, GEF/LME project – funded through IOC/UNESCO, Jan 31 – Feb 5, 31 participants from 3 countries. Coordinator and lecturer
- 2007: Biogeochemical processes and fish dynamics in food web models for end-to-end conceptualization of marine ecosystems. Theory and use of Ecopath with Ecosim. Workshop at the 6<sup>th</sup> European Conf. on Ecological Modelling, ECEM'07. Trieste, Italy, November 26-27, 60 participants. Lecturer (solo), resource person and organizer
- 2007: \* Spatial modeling workshop, EU IncoFish, La Paz, Mexico, Mar 16-21. Lecturer (solo) and resource person [30 participants from 10 countries]
- 2007: \* International ecosystem modeling workshop, EU ECOST, Sète, France, Feb 26 – Mar 2. Coordinator and (solo) lecturer [26 participants from 11 countries]
- 2006: \* International ecosystem modeling workshop, EU IncoFish, Cape Town, Sep 11-15. Lecturer (solo) and resource person [22 participants from 12 countries]
- 2006: \* EwE ecosystem modeling programming course, Smithsonian Environmental Research Center, Edgewater MD, August 28-31. Coordinator and lecturer [22 participants from 3 countries; evaluation available]
- 2006: \* EwE fisheries economics training course, Guinea Current GEF/LME project, Accra, Ghana, 18-22 April. Coordinator and lecturer [30 participants from 16 West African countries; evaluation available]
- 2005: \* EwE training course, Benguela Current GEF/LME project, Univ. of Cape Town, 5-14 Dec. Coordinator and lecturer [16 participants from 6 countries; evaluation available]
- 2004: \* EwE training course, NMFS Galveston, Texas, 30 Nov – 3 Dec. Coordinator and lecturer
- 2004: \* EwE training course, GEF Baltic Seas Regional Project, Jūrmala, Latvia, 18-22 Oct. Coordinator and (solo) lecturer [19 participants from 7 countries]
- 2003: EwE modeling workshop for Chesapeake Bay, NOAA Chesapeake Office, Patuxent MD, 28-29 April. Lecturer / PI
- 2002: \* Ecosystem modeling workshop, Rønbjerg, Denmark, 25-29 Nov. Workshop leader and lecturer (solo)
- 2002: \* Ecosystem management workshop 'Enfoque Metodologico para el analisis ecosistemico en la administracion de pesquerias de la zona central de Chile', Concepción, Chile, 14-15 Nov. 2002. Workshop leader, lecturer (solo)
- 2002: Ecosystem modeling workshop, Virginia Institute of Marine Science, Gloucester Point, VA 13-14 May 2002. Workshop leader/PI,
- 2002: \* Ecosim training course, Smithsonian Environmental Research Center, Edgewater, MD., 8-10 May Coordinator and lecturer
- 2002: \* EwE training course, Univ. of Florida, Tallahassee, FL 29 April - 3 May. Coordinator and lecturer
- 2002: \* Ecopath training course, Annapolis, MD, 19-20 Feb. Coordinator and lecturer (solo)
- 2000: \* APEC Training Workshop on Marine Ecosystem Modeling and Analysis, 7-10 August, Academia Sinica, Taipei, Taiwan. Resource person and lecturer [52 participants]
- 2000: \* FAO workshop on the Use of Ecosystem Models to Investigate Multispecies Management Strategies for Capture Fisheries. 17-20 July. UBC FC and FAO. Resource person, lecturer. [31 participants from 13 countries]
- 2000: Bioeconomic modelling workshop on the Thai demersal fisheries in the Gulf of Thailand. 31 May-9 June, Hua Hin, Thailand. DOF, Thailand and FAO. Resource person, invited speaker, [10 participants]
- 1999: \* Regional ecosystem modeling training course, Manila, Philippines, 7-11 June. Coordinator and lecturer
- 1998: \* International workshop "Placing fisheries in their ecosystem context", Univ. of Sao Paulo, Sao Paulo, Brazil, 30 Nov - 5 Dec. Coordinator and lecturer [27 participants from 6 countries]
- 1998: \* ADB-funded Regional Training Workshop on Methods of Analysis of Fishery Resources, Songkhla, Thailand, 1-3 Nov. Lecturer (solo)

- 1998: \* International training course "Placing fisheries in their ecosystem context", North Sea Centre, Denmark, 4-8 Aug. Coordinator and lecturer [31 participants from 22 European and West African countries]
- 1998: \* Regional training course on application of Ecopath with Ecosim, Universidad Nacional, Puntarenas, Costa Rica, 21-28 April. Coordinator and lecturer [31 participants from 9 countries]
- 1998: FAO Expert Consultation "Use of Ecopath with Ecosim to Evaluate Strategies for Sustainable Exploitation of Multi-Species Resources." Fisheries Centre, UBC, Canada, 25-27 Mar. Co-organizer and lecturer, [27 participants from 9 countries]
- 1997: \* Regional training course, "Placing fisheries in their ecosystem context", Univ. of Cape Town, Cape Town, South Africa, 9-17 Dec. Coordinator and lecturer [20 participants]
- 1997: \* Ecopath course at Institute of Zoology, Academia Sinica, Taiwan, 13-16 Oct. Lecturer (solo)
- 1996: \* International course: "Ecopath: Modeling and Management of Aquatic Ecosystems", CICIMAR, La Paz, Baja California Sur, Mexico, 21-26 Oct. Lecturer.
- 1993: \* Ecopath course for scientists from 5 Malaysian fisheries research institutions at the Marine Fisheries Research Development and Management Division / South East Asian Fisheries Development Center (MFRDMD/SEAFDEC), Kuala Terengganu, Malaysia, September (two weeks). Lecturer (solo)
- 1993: \* Ecopath course for scientists from developing countries, 8-19 Mar. Center for Marine Tropical Ecology (ZMT), Bremen, Germany. Lecturer

## 9. **SCHOLARLY AND PROFESSIONAL ACTIVITIES**

### (a) *Areas of special interest and accomplishments*

I am considered a world leader in development of ecosystem models for fisheries policy use, and I lead the development of the widely applied Ecopath software for ecosystem simulation and policy analysis. The approach was in 2007 named by the US National Oceanographic and Atmospheric Administration as one of the ten biggest scientific breakthroughs in the organization's 200-year history. See also (5), Special Professional Qualifications.

### (b) *Research or equivalent grants (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC))*

Granting Agency	Subject	COMP	\$ Per Year	Year	Principal Investigator(s)	Co-Investigator(s)
NSERC	Discovery Grant	C	\$19,250 (per year)	2007-2012	Villy Christensen	
Netherlands Environmental Assessment Agency (PBL)	Global Biodiversity Outlook	NC	€ 100,000 (total, \$CAD 157,592)	2009-2011	Villy Christensen	
UNEP	State and Outlook of Marine Biodiversity – Regional Seas	NC	US\$80,000	2010	Villy Christensen	
Lenfest Ocean Program	Lenfest Ocean Futures Project, Phase II	NC	US\$ 560,000	2008.2 – 2010.1	Villy Christensen	
Canadian Bureau for International Education, FAITC	Canada/CARICOM Leadership Scholarships	C	\$10,000	2009	Villy Christensen	
UBC VP Research & International	Ecopath 25 Year conference	NC	\$3,000	2009	Villy Christensen	
Environmental Protection Agency, Sweden	Ecosystem modeling of the Baltic	C	~\$19,700	2009	Villy Christensen	



Canadian Bureau for International Education, Foreign Affairs and International Trade Canada (FAITC)	Caribbean Student Exchange Program	C	\$10,000	2008	Villy Christensen	
Duke University & Packard Foundation	Ecoseed, an evaluation tool for placement and sizing of protected areas	C	US\$ 100,000	2007-8	Villy Christensen	Zach Ferdaña
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (training course)	NC/C	US\$ 20,000	2008	Villy Christensen	World-Fish Center
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (global activity)	NC/C	US\$ 95,000	2007-2008	Villy Christensen	
Finnish Institute of Marine Research	Developing module for tracking persistent substances	N	\$20,000	2007	Villy Christensen	
Scottish Association for Marine Science	Programming of Ecological Network Analysis	NC	£5,000 (\$11,600)	2007	Villy Christensen	
BC Ministry of the Environment	Visualization of pine beetle attacks	NC	\$40,000 (total)	2006-2007	Villy Christensen	
Lenfest Ocean Program	Lenfest Ocean Futures Project	NC	US\$ 401,000	2005-2007	Villy Christensen	Daniel Pauly
Netherlands Ministry for the Environment	Global Biodiversity Outlook (GLOBIO2)	NC	€ 60,000 (total)	2005-2007	Villy Christensen	Jackie Alder
UNEP	Global Environment Outlook (GEO4) scenarios modeling	NC	US\$ 60,000 (total)	2005-2007	Villy Christensen	Jackie Alder
OECD	OECD Environment Outlook, scenario development	NC	US\$ 10,027	2006	Villy Christensen	Jackie Alder
NSERC, Research Tools and Instruments	Large screen with multi-touch interface	C	\$ 113,000	2006	Kellogg Booth	Villy Christensen & others
Scientific Commission for Oceanographic Research/ UNESCO-IOC	Quantitative ecosystem indicators for fisheries management	C	~US\$ 40,000 (x4); + ~US\$ 10,000	2001-2006	Philippe Cury & Villy Christensen	
David Suzuki Foundation	Biomass reconstruction project (gift)	NC	\$12,000	2005	Villy Christensen	
Global Environment Facility/ UNESCO-IOC	Promoting ecosystem-based approaches to fisheries conservation and LME's (global activity)	NC/C	US\$ 110,000	2005	Villy Christensen	

(Activity of 4 <sup>th</sup> World Fisheries Congress; fee based)	Ecopath training course at UBC	NC	\$37,750	2004	Villy Christensen & Carl Walters	
NMFS/ NPUMMRC	Ecosystem analysis of Steller sea lion dynamics and their prey	C	US\$ 110,250 (x2)	2003-2004	Villy Christensen & Andrew Trites	
(Fee based)	Ecopath training course at UBC	NC	\$48,006	2000	Villy Christensen & Carl Walters	

(c) Research or equivalent contracts (indicate under COMP whether grants were obtained competitively (C) or non-competitively (NC)).

Granting Agency	Subject	COMP	\$ Per Year	Year	Principal Investigator	Co-investigator(s)
Netherlands Environmental Assessment Agency (PBL)	The Economics of Ecosystems and Biodiversity	NC	\$25,000	2010	Villy Christensen	
CEFAS, UK	Programming of model coupling	NC	C\$5,000	2010	Villy Christensen	
Marine Stewardship Council	Management Strategy Evaluation module for EwE	NC	AUD\$ 10,000 (C\$8,325)	2010	Villy Christensen	
University of Hawaii	Programming of indicator module for EwE	NC	US\$ 24,750	2010	Villy Christensen	
Lenfest Ocean Program (subcontract from Peru)	Towards ecosystem-based management of the Peruvian anchovy fishery	NC	US\$ 103,500 (x2)	2010-11	Villy Christensen	
CEFAS, UK	Programming of variable time step in Ecosim	NC	C\$5,000	2009-10	Villy Christensen	
US Dept. of Commerce	Fisheries ecosystem model for the Chesapeake Bay	C	US\$ 45,000	2008-09	Villy Christensen	
US Dept. Commerce	Fisheries ecosystem model for the Chesapeake Bay	C	US\$ 50,000	2006-08	Villy Christensen	
Fisheries and Oceans Canada	Report on ecosystem activities and indicators	NC	\$5,350	2006	Villy Christensen	
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	US\$ 49,832	2005	Villy Christensen	Carl Walters & Steven Martell
US Department of Commerce	Chesapeake Bay Stock Assessment (NA05NMF4571261)	C	US\$56,067 (CAD 69,505)	2005	Steven Martell	Villy Christensen & Rob Latour
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	US\$ 70,000	2004	Villy Christensen	Carl Walters & Steven Martell
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	US\$ 80,000	2003	Villy Christensen	Carl Walters & Steven Martell

US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	US\$ 75,000	2002	Villy Christensen	Carl Walters
Chesapeake Bay Research Consortium	Ecosystem modeling training course	NC	US\$ 24,429	2002	Villy Christensen	
US Department of Commerce	A dynamic mass balance model of the Chesapeake Bay ecosystem	C	US\$ 85,000	2001	Villy Christensen	Carl Walters
European Union	Service contract, ecosystem modeling	NC	€ 10,000	1998	Villy Christensen	
European Union	Placing fisheries in their ecosystem context	C	€ 90,000 (x4)	1997 - 2001	Villy Christensen	

*(c) Invited Presentations*

- 2009: Anchoveta in the ecosystem: Ecosystem-based management. Universidad Peruana Cayetano Heredia. 12 Nov. Public lecture.
- 2009: Análisis de efectos ecosistémicos. Conference Las Cuotas de Captura: Análisis de Experiencia Peruana, Universidad de Lima, 10 Nov. Presentation to the fishing industry hosted by the Ministry of Production.
- 2009: Ecosystem-based management of the Peruvian anchovy fishery. IMARPE. Lima, 9 Nov. Presentation to researchers.
- 2009: The future of Ecopath. Keynote lecture, Ecopath 25 Years, International Conference, UBC, Aug. 31 - Sep 2.
- 2009: Using food web analysis to inform policy on food security. The Unexpected Link – Conference on Network Science. Central European University, Budapest, Hungary, June 17-18.
- 2009: Bevan Symposium on Sustainable Fisheries, School of Fisheries, Univ. of Washington, Seattle. Quantitative support tools to implement EBFM, April 30-May 1, 2009.
- 2009: Biodiversity modeling for global policy scenarios. Netherlands Environmental Assessment Agency, Bilthoven, Netherlands, March 2, 2009
- 2008: Overview of Ecopath with Ecosim and the Ecosed project. EBM Tool Network Public Webinar, March 26, 2008
- 2007: Ecopath with Ecosim 6: New generation ecosystem modeling package. PICES 16<sup>th</sup> Annual Meeting, Victoria BC, October 30, 2007
- 2007: Ecosystem-based Management. Baltic STERN workshop on linking food web modeling and fisheries economy, Resilience Centre, Stockholm, 22-23 November
- 2007: Tracking persistent pollutants through the food web. Workshop on Developing Integrated Monitoring and Modeling Programs for Hg in the Chesapeake Bay. STAC & NOAA Chesapeake Bay. Baltimore, US, Oct 2-4.
- 2007: Ecosystem Models. Department of Fisheries and Oceans, Ecosystem Modeling Workshop, Victoria, Oct 22-25
- 2007: Using ecosystem modeling for fisheries management. Centre de Recherche Halieutique Méditerranéenne et Tropicale, Sète, France, March 2007
- 2006: PICES/NPRB Integration of Ecological Indicators for the North Pacific WS, Seattle, WA. 1-3 June, Invited speaker
- 2005: National Academies' Ocean Studies Board, Committee on Ecosystem Effects of Fishing, 9 May, Seattle WA, invited speaker
- 2005: Ecosystem Science and Management Planning Workshop, Western Pacific Regional Fisheries Council. April 18-22, 2005. Honolulu, Hawaii, USA. Expert panel member/invited speaker.
- 2004: Fourth World Fisheries Congress, Vancouver Canada, 2-6 May. Session leader/speaker
- 2002: Mote Symposium, Trade-offs in fisheries management, Sarasota, Florida, 4-7 Nov. 2002, Invited speaker
- 2002: Ecosystem modeling workshop, Faroe Fisheries Institute, Torshavn, Faroe Islands, 24-27 Sep 2002. Invited speaker,
- 2000: US Atlantic States Marine Fisheries Commission, Multispecies Assessment Feasibility Workshop, 15-16 August 2000, Alexandria, Virginia, USA. Invited speaker

- 2000: Canadian Living Marine Resources - Global Ocean Observation System workshop, 29-30 March, BIO, Halifax, Canada. Invited speaker,
- 2000: History of Marine Animal Populations Workshop, Census of Marine Life, 19-22 Feb., Esbjerg, Denmark. Invited speaker,
- 1999: Census of Marine Life, Ocean Biogeographical Information System Workshop, 3-4 Nov., AGU, Washington, DC USA. Invited speaker,
- 1998: Workshop on Comparative Dynamics of Exploited Ecosystems of the Northwest Atlantic, Halifax, N.S., Canada, 12-15 November, Lecturer, invited speaker.
- 1998: Conference on Biodiversity and Development, The Danida Research Council, Copenhagen, 21 Oct 1998. "Biodiversity and Development: Exploitation of Marine Resources". Keynote speaker
- 1998: Tropical Fish Biology Symposium of the Fisheries Society of the British Isles, 13-17 July, Southampton, U.K. Keynote speaker
- 1998: Scientific coordinator and keynote speaker, EC Conference "Ocean food webs and economic productivity", Lisbon, 30 June-3 July. "Fisheries research and the challenge of ecosystem management"
- 1997: International conference: "Ocean Harvest 97", Southampton Oceanographic Centre, U.K., June. Invited speaker.
- 1996: 3rd Regional Dialogue, ACP-EU Fisheries Research Initiative, Belize, 5-10 Dec., Resource person, invited speaker
- 1996: GLOBEC, Small Pelagics and Climate Change Modelling Workshop. JRC, Ispra, Italy. October 14-16, invited speaker
- 1996: International symposium "Unifying Goal Functions" at the Salzau Cultural Centre, Germany, 30 Aug.-4 Sep. Invited speaker.
- 1996: U.S. NAS' Ocean Studies Board International Conference on Ecosystem Management for Sustainable Fisheries, Monterey, California, 19-23 February. Invited speaker.

*(e) Other Presentations*

Numerous, some examples:

- 2009: "Life in Cheapeake Bay", Chesapeake Bay Fisheries Symposium, April, Patuxent, MD, video screening
- 2005: Estuarine Research Foundation 2005, 20-21 October, Norfolk, VA, speaker.
- 2005: Chesapeake Bay Fisheries Research Symposium, 27-28 April, Patuxent, MD, speaker
- 2004: Chesapeake Bay Fisheries Research Symposium, 25-26 Feb, Patuxent, MD, speaker
- 2003: Chesapeake Bay Fisheries Research Symposium, Feb, Patuxent, MD, speaker

*(f) Other (includes working groups and workshops where I have acted as leader/resource person)*

- [2010: GEF/IOC LME Transboundary Water Assessment Working Group, GRID, Arendal, Norway, July]
- [2010: GEF/IOC LME Transboundary Water Assessment Working Group, Paris, 1-5 Feb.]
- 2009: GEF 11<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 9-10 July. Speaker
- 2009: Scenarios and models for exploring future trends of biodiversity and ecosystem services changes. European Commission, Brussels. Invited panelist, 13 May
- 2008: Integrating climate and Australian Ecopath models to predict climate change impacts on Australian marine systems. CSIRO Climate Adaptation Flagship, University of Tasmania, Hobart, 2-4 September. Resource person, lecturer
- 2008: GEF 10<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 8-9 July. Speaker
- 2007: Ecosystem Tool Developers Network Workshop. UBC Fisheries Centre. Oct 18-19, co-chair.
- 2007: NOAA National Ecosystem Modeling Workshop, Santa Cruz, CA, August 28-31
- 2007: GEF 9<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July 10-11. Speaker
- 2007: FAO Expert Consultation: "Modelling ecosystem interactions for informing and ecosystem approach to fisheries: Best practices in ecosystem modeling", Tivoli, Italy, July 3-6.
- 2007: Ecosystem modeling workshop. Sun-Yat Sen University, Guangzhou, China, April 9; leader.
- 2007: Gulf of Mexico Fisheries Management Council's Ecosystem Modeling Workshop, FWRI, St. Petersburg, FL., May 8-10; resource person
- 2006: Integrating ecosystem and economic modeling, workshop, Univ. of Amsterdam, Amsterdam Nov 1-3.
- 2006: South Atlantic Fisheries Management Council's planning workshop for ecosystem approaches to fisheries, Oct 20, Vancouver, BC; organizer and host.

- 2006: Ecosystem Tool Developers Network Workshop. The Nature Conservancy, Santa Cruz, September
  - 2006: GEF 8<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, July. Speaker
  - 2006: Ecosystem Tool Developers Network, Kick-off Workshop, Packard Foundation and NatureServe, Arlington VA, March 22-24.
  - 2005: Research and Monitoring Workshop, Ecosystem Management in the South Atlantic Region, South Atlantic Fisheries Management Council, Charleston, SC, 16-18 Nov, resource person/speaker.
  - 2005: NOAA Assistant Regional Administrator's Fisheries Habitat Conservation Meeting, Anchorage, AK, 19 Sep, resource person/speaker.
  - 2005: GEF 7<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 6-7 July. Speaker
  - 2005: Working group on management policies for marine management, NCEAS, Santa Barbara CA, 21-23 March.
  - 2005: International workshop: NOAA Decision Tools for Ecosystem Based Management of Fisheries. 14-18 Feb, Key Largo, Florida, session chair/speaker.
  - 2004: Working group on management policies for marine management, National Center for Ecosystem Analysis and Synthesis (NCEAS), Santa Barbara CA, 7-10 Dec.
  - 2004: Tools for Coastal-Marine Ecosystem-Based Management, Packard Foundation and NatureServe, Arlington VA, August 20.
  - 2004: GEF 6<sup>th</sup> Consultative Committee Meeting on GEF/LME. UNESCO, Paris, 30 Mar. Speaker
  - 2004: International workshop, Ecosystem model and database integration, La Paz, Baja California Sur, Mexico, 2-5 March, resource person/speaker.
  - 2003: International Workshop, Role of fisheries and climate in the North Pacific. PBS, DFO, Nanaimo 16-18 September. Co-chair.
  - 2003: International workshop, Modeling Antarctic ecosystems, UBC, 15-17 April. Resource person, speaker
  - 2002: International workshop. An ecosystem approach to fisheries management in the southern Benguela, UCT, Cape Town, 9-11 Dec. Resource person, speaker
  - 2002: SCOR/IOC WG 119 Meeting on Quantitative Ecosystem Indicators for Fisheries Management, Cape Town, 4-6 October, Co-chair.
  - 2002: EwE Hecate Strait workshop, DFO, Nanaimo, 9-10 April 2002. Resource person, speaker
  - 2001: SCOR/IOC WG 119 Meeting on Quantitative Ecosystem Indicators for Fisheries Management, Reykjavik, Iceland, 5-6 October, Co-chair.
  - 2001: Workshop on Ecosystem approaches to fisheries management, CSIRO Marine Laboratories, Hobart, Tasmania, 28-30 August. Resource person, invited speaker
  - 2001: Considerations for Ecosystem Management of the Northern Benguela Ecosystem, Workshop, Swakopmund, Namibia, 23-25 May. Resource person, invited speaker
  - 2001: International Workshop on Management of Tropical Coastal Fisheries in Asia, 20-23 March, Penang, Malaysia. Resource person, invited speaker
  - 2001: Ecopath with Ecosim modeling workshop for Chesapeake Bay, NOAA Chesapeake Office, Patuxent MD, 22-24 October. Workshop leader/PI,
  - 1998: Ocean Studies Board, U.S. National Academy of Sciences, workshop "Assessing the Global Distribution and Abundance of Marine Organisms", Monterey, California, 13-15 Jan. Invited participant,
  - 1995: International workshop "Mass-balance models of Northeastern Pacific ecosystems", 6-10 November. Fisheries Centre, University of British Columbia, Vancouver, Canada. Resource person, lecturer
  - 1993: Two week workshop on modeling of resource interactions in the Northwest Atlantic, October, at the Dept. of Fisheries & Oceans (DFO), Newfoundland, Canada. Resource person, lecturer
  - 1991: CEC Workshop. Techniques for biological assessment in fisheries management, 17-24 July, Jülich, Germany Invited participant
- (g) Conference Participation (Organizer, Keynote Speaker, etc.). Includes invited participation only*
- 2010: AAAS panel, Bridging Science and Society for Sustainability: The Role of Visualization, San Diego, US, Feb. 20. Co-organizer
  - 2009: Ecopath 25 Years, International Conference and Workshops, UBC, Aug 30-Sep 5. Convener. 127 participants from 21 countries
  - 2007: European Conf. on Ecological Modelling, ECEM'07, Trieste, Italy. Nov. 27-30. Session chair/speaker
  - 2006: Thinking Big, A Global Look at Fisheries Science. Celebratory Symposium for Daniel Pauly, May 1-3, UBC. Organizer/session chair
  - 2005: ICES Annual Science Conference, Aberdeen, Scotland, 21-24 September. Theme session chair/speaker

- 2004: International symposium "Quantitative Indicators for Fisheries Management" IOC/Unesco HQ, Paris, 31 March - 3 April. Co-convener, (250+ participants, 43 countries)
- 2000: International Conference "Placing Fisheries in Their Ecosystem Context", 4-8 December, Charles Darwin Research Station, Galapagos Islands, Ecuador. Coordinator and co-convener
- 1999: WWF/Charles Darwin Foundation for the Galápagos Islands Biodiversity Workshop, Galápagos, 25-28 May. Invited participant
- 1999: FAO/Australia Technical Consultation on the Use of Indicators of Sustainable Fisheries Development, Sydney, Australia, 18-22 January. Invited expert,
- 1998: 10th Global Biodiversity Forum, Bratislava, Slovakia, 30 April-2 May, speaker.

## **10. SERVICE TO THE UNIVERSITY**

### *(a) Memberships on committees, including offices held and dates*

- 2009:- UBC International Advisory Council, member
- 2006:- COSMOS International Graduate Travel Award, Committee Member
- 2006-2009 AERL IT Committee, chair
- 2005:- North Pacific Universities Marine Mammal Research Consortium, Scientific Advisory Committee Member
- 2005: AERL Building Implementation Committee
- 2004-2005: AERL Building IT Budget Committee
- 2004-2005: AERL Scenario Lab Planning Committee
- 1999-2003: Sea Around Us Project Steering Committee

### *(b) Other service, including dates*

- 2010 Examiner, Doctoral Exam of Robert Ahrens, Zoology, 4 April
- 2009 Examiner, Doctoral Exam of Michael Melnychuk, Zoology, 7 Dec.
- 2009 Chair, Doctoral Exam of Julie Deslippe, Forestry, 3 Dec.
- 2009 Chair, Doctoral Exam of Stephen TB Lau, Chemistry, 27 May
- 2008 University Examiner, Doctoral Exam of Robyn Forrest, RMES, 18 Dec.
- 2007 Examiner, Comprehensive Exam of Leigh Gurney, EOS, 7 Nov.
- 2007 Examiner, Doctoral Exam of Lyne Morisette, Zoology, 17 Sep.
- 2007 Examiner, M.Sc. Exam of Pablo Trujillo, RMES, 28 Aug.
- 2007 University Examiner, Doctoral Exam of Wai Lung Cheung, Zoology, 17 May
- 2007 Examiner, Doctoral Exam of David Preikshot, RMES, 13 Mar.
- 2007 University Examiner, Doctoral Exam of Telmo Morato, Zoology, 26 Jan.
- 2006 Chair, Comprehensive Exam of Sarah Foster, RMES, 16 June
- 2006 University Examiner, Doctoral Exam of Cameron Ainsworth, Zoology, 28 April
- 2005 Chair, Doctoral Exam of Sudhagar Mani, Chemistry, 9 Sep.
- 1999 University examiner, M.Sc. Exam of Edward Nsiku

## **11. SERVICE TO THE COMMUNITY**

### *(a) Memberships on scholarly societies, including offices held and dates*

- International Society for Ecological Modeling, member
- American Fisheries Society, member

### *(b) Memberships on other societies, including offices held and dates*

### *(c) Memberships on scholarly committees, including offices held and dates*

- GEF Transboundary Water Assessment, GEF/IOC Open Ocean Working Group (TWAP). Member, 2010 –
- GEF Transboundary Water Assessment, GEF/IOC LME Working Group (TWAP). Member, 2009 –
- GEF/IOC/NOAA/IUCN Large Marine Ecosystems Consultative Committee, Member, 2005 – present
- Oceana, Science Advisory Board Member, 2003 – present
- IUCN Commission on Ecosystem Management, member, 1998 - present

ECCEM'07, the 6th European Conference on Ecological Modelling. Trieste, Italy, November 27-30, 2007.  
Scientific Advisory Committee, Member.

2nd Global Conference on Large Marine Ecosystems, Steering Committee Member. September 2007

Scientific Committee on Oceanographic Research (SCOR) / UNESCO's Intergovernmental Oceanographic Commission's joint WG 119 on "Quantitative Ecosystem Indicators for Fisheries Management", Co-chair. 2001-2006

Pacific Ocean Shelf Tracking project, Pelagic WG, Member, 2004

Millennium Ecosystem Assessment, Contributing author, marine systems, 2002-2005

SCOR Working Group 105 on the Impact of World Fisheries Harvests on the Stability and Diversity of Marine Ecosystems, Member. 1996-1999

*(d) Memberships on other committees, including offices held and dates*

ICES Multispecies Assessment WG, Member, 1992-1997

Nordic Council Herring Research Planning Group, Member, 1987-1989

ICES Herring Assessment Working Group (WG), Member, 1985-1989

ICES Larval Fish Ecology WG, Member, 1983-1989

ICES International Herring Larvae Survey WG, Member, Chair 1985-1989. Member 1981-1984

*(e) Editorships (list journal and dates)*

Guest editor: ICES Journal of Marine Science, special issue, 2005

Guest editor: Ecological Modeling, special issue, 2004

Editorial Board Member, Ecological Modelling, Elsevier Science Publishers, 1992 – present

Editorial Board Member, Open Fish Science Journal, Bentham Science Publishers, 2008 - present

Co-Editor, FishByte, Network of Tropical Fisheries Scientists (in Naga, the ICLARM Quarterly), 1997-1999

Editorial Board Member, Dana, international fisheries journal, Olsen & Olsen Publishers, 1992-1997

*(f) Reviewer (journal, agency, etc. including dates)*

Reviewer for a large number of journals, including for African J Marine Science; Bull of Marine Science; Conservation Ecology; CJFAS; Dana; Estuarine, Coastal and Shelf Science; Fish and Fisheries; Fisheries; Global Change Biology; JEMBE; J Marine Systems; MEPS; Nature (2008:1; 2007:1; 2006:2); Science (2008:1; 2007:1) Reviews regularly for Ecological Modelling (Editorial Board Member)

Book review for Cambridge Univ. Press (2009)

Grant proposals to NS ERC (2008:1), Research Council of Norway (2008:2), NERC UK (2007), NSF (2005:2), International Foundation for Science, Stockholm (2005, 2001), DEFRA, UK, (2001); Great Lakes Fishery Commission (2001); South African National Research Foundation (2001)

*(g) External examiner (indicate universities and dates)*

2002: Univ. of Tasmania, Ph.D. thesis of Ms. Catherine Bulman,

2002: James Cook University, Australia. M.Sc. thesis of Dr Neil Gribble

2000: Memorial Univ. of Newfoundland, M.Sc. thesis of Ms. Jill Casey

1997: Univ. of Port Elizabeth, RSA. Ph.D. thesis of Ms. J.J. Heymans

*(h) Consultant (indicate organization and dates)*

1997: Evaluation of FAO/Danida project on Training in Fish Stock Assessment and Fishery Research Planning. Team leader; 1-month mission to Italy, Namibia, Indonesia and Thailand

1994/95: UN FAO writers contract on management of fisheries involving top predator and prey species components.

1993: UN Food and Agriculture Organization (FAO) writers contract on the structure of the pelagic ecosystem in the Black Sea.

*(i) Other service to the community*

Founding member of [EBM Tool Network](#)

Founding member of EBM Tool Developers Collaborative

## 12. **AWARDS AND DISTINCTIONS**

- (a) *Awards for Teaching (indicate name of award, awarding organizations, date)*
- (b) *Awards for Scholarship (indicate name of award, awarding organizations, date)*
- (c) *Awards for Service (indicate name of award, awarding organizations, date)*
- (d) *Other Awards*

EwE, for which I have been the project leader since 1990, was named one of ten major scientific breakthroughs in the 200-year history of the US National Oceanographic and Atmospheric Administration in 2007.

The University of Victoria 2007 Craigdarroch Award for Societal Contribution; co-recipient for contribution to the 'Coast under Stress' project

Zayed International Prize for the Environment, 2006. 2<sup>nd</sup> prize, co-recipient for contribution to the 'Millennium Ecosystem Assessment'

13. **OTHER RELEVANT INFORMATION (Maximum one page)**



**THE UNIVERSITY OF BRITISH COLUMBIA****Publications Record****SURNAME:** Christensen**FIRST NAME:** Villy  
**MIDDLE NAME(S)****Initials:** VC  
**Date:** 19-Jul-10**1. REFEREED PUBLICATIONS***(a) Journals*

- Christensen, V. 2010. Behavior of sandeels feeding on herring larvae. *Open Fish Journal* (in press).
- Christensen, V. 2010. MEY = MSY. *Fish and Fisheries* 11(1):105-110.
- Ma, H., Townsend, H., Zhang, X., Sigrist, M., and Christensen, V. 2010. Using a fisheries ecosystem model with a water quality model to explore trophic and habitat impacts on fisheries stock: A case study of the blue crab population in Chesapeake Bay. *Ecological Modelling*, 221(7): 997-1004; ([dx.doi.org/10.1016/j.ecolmodel.2009.01.026](https://doi.org/10.1016/j.ecolmodel.2009.01.026)).
- Piroddi, C., Giovanni, B., Christensen, V. in press. Effects of local fishery and ocean productivity on the Northeastern Ionian Sea ecosystem. (*Ecological Modelling*).
- Brown, C. J., Fulton, E.A., Hobday, A.J., Matear, R., Possingham, H., Bulman, C., Christensen, V., Forrest, R., Gehrke, P., Gribble, N., Griffiths, S., Lozano-Montes, H., Martin, J., Metcalf, S., Okey, T., Watson, R., and Richardson, A.J. 2010. Effects of climate-driven primary production change on marine food webs: implications for fisheries and conservation. *Global Change Biology*, 16(4):1194-1212.
- Christensen, V., Z. Ferdaña, J. Steenbeek. 2009. Spatial optimization of protected area placement incorporating ecological, social and economical criteria. *Ecological Modelling* 220:2583-2593
- Christensen, V., Walters, C.J., Ahrens, R., Alder, J., Buszowski, J., Christensen, L.B., Cheung, W.W.L., Dunne, J., Froese, R., Karpouzi, V., Kastner, K., Kearney, K., Lai, S., Lam, V., Palomares, M.L.D., Peters-Mason, A., Piroddi, C., Sarmiento, J.L., Steenbeek, J., Sumaila, R., Watson, R., Zeller, D. and Pauly, D., 2009. Database-driven models of the world's large marine ecosystems. *Ecological Modelling*, 220:1984-1996. ([doi/10.1016/j.ecolmodel.2009.04.041](https://doi.org/10.1016/j.ecolmodel.2009.04.041))
- Duan, L.J., Li, S.Y., Liu, Y., Moreau, J. and Christensen, V. 2009. Modeling changes in the coastal ecosystem of the Pearl River Estuary from 1981 to 1998. *Ecological Modelling* 220:2802-2818.
- Heymans, J.J., U.R. Sumaila, V. Christensen. 2009. Policy options for the northern Benguela ecosystem using a multi-species, multi-fleet model. *Progress in Oceanography* 53:417-425. ([doi/10.1016/j.pocean.2009.07.013](https://doi.org/10.1016/j.pocean.2009.07.013))
- Melnichuk, M.C. and V. Christensen. 2009. Methods for estimating detection efficiency and tracking acoustic tags with mobile transect surveys. *J Fish Biol.*, 75:1773-1794.
- Neira, S., C. Moloney, P. Cury, C. Mullon, and V. Christensen. 2009. Mechanisms affecting recovery in an upwelling food web: the case of the southern Humboldt. *Progress in Oceanography* 53:404-416. ([doi/10.1016/j.pocean.2009.07.007](https://doi.org/10.1016/j.pocean.2009.07.007)).
- Walters, C., V. Christensen, W. Walters, K. Rose. 2009. Representation of multi-stanza life histories in Ecospace models for spatial organization of ecosystem trophic interaction patterns. *Bull. Mar. Sci.* 00:000-000
- Wilson, R.W., F.J. Millero, J.R. Taylor, P.J. Walsh, V. Christensen, S. Jennings & M. Grosell. 2009. Contribution of fish to the marine inorganic carbon cycle. *Science* 323: 359-362.
- Freire, K.M.F, Christensen, V., Pauly, D. 2008. Description of the East Brazil Large Marine Ecosystem using a trophic model. *Scientia Marina* 72(3): 477-491
- Gascuel, D., Morissette, L., Palomares, M.L.D. and Christensen, V., 2008. Trophic flow kinetics in marine ecosystems: Toward a theoretical approach to ecosystem functioning. *Ecological Modelling*, 217: 33-47.
- Guénette, S, Christensen, V, Pauly, D. 2008. Trophic modeling of the Peruvian upwelling ecosystem: towards reconciliation of multiple datasets. *Progress in Oceanography*, 57(2-4): 326-335 ([doi/10.1016/j.pocean.2008.10.005](https://doi.org/10.1016/j.pocean.2008.10.005)).
- Walters, C.J, R. Hilborn, V. Christensen. 2008. Surplus production dynamics in declining and recovering fish populations. *Canadian Journal of Fisheries and Aquatic Research*, 65:2536-2551 (doi:10.1139/F08-170).
- Walters, C, Martell, S.J.D, Christensen, V, and Mahmoudi, B. 2008. An Ecosim model for exploring ecosystem management options for the Gulf of Mexico: implications of including multistanza life history models for policy predictions. *Bull. Mar. Sci.* 83(1): 251-271.
- Christensen, V., Aiken, K.A., Villanueva, M.C. 2007. Threats to the ocean: on the role of ecosystem approaches to fisheries. *Social Science Information*: 46(1): 67-86.

- Freire, K.M.F., Christensen, V., Pauly, D. 2007. Assessing fishing policies for northeastern Brazil. [Pan-American Journal of Aquatic Sciences](#) 2(2): 113-130.
- Heymans, J.J., Gu  nette, S., and Christensen, V. 2007. Evaluating network analysis indicators of ecosystem status in the Gulf of Alaska. [Ecosystems](#): 10(3):488-502
- Melnychuk, M.C., Welch, D.W., Walters, C.J., and Christensen, V. 2007. Riverine and early ocean migration and mortality patterns of juvenile steelhead trout (*Oncorhynchus mykiss*) from the Cheakamus River, British Columbia. [Hydrobiologia](#) 582:55-65.
- Walters, C and V. Christensen. 2007. Adding realism to foraging arena predictions of trophic flow rates in Ecosim ecosystem models: shared foraging arenas and bout feeding. [Ecological Modelling](#) 209:342-350.
- Gu  nette, S., Heymans, J. J., Christensen, V., and Trites, A. W. 2006. Ecosystem models show combined effects of fishing, predation, competition, and ocean productivity on Steller sea lions (*Eumetopias jubatus*) in Alaska. [Can. J. Fish. Aquat. Sci.](#), 63:2495-2517
- Libralato, S., V. Christensen and D. Pauly. 2006. A method for identifying keystone species in food web models. [Ecological Modelling](#), 195:153-171.
- Daan, N., V. Christensen and P. Cury (Eds.) 2005. Quantitative Ecosystem Indicators for Fisheries Management. [ICES Journal of Marine Science](#) 62(3):308-615. (Special issue)
- Sherman, K., Sissenwine, M., Christensen, V., Duda, A., Hempel, G., Ibe, C., Levin, S., et al. 2005. A global movement toward an ecosystem approach to management of marine resources. [Marine Ecology Progress Series](#) 300, 275-279.
- Walters, C. J., Christensen, V., Martell, S. J., and Kitchell, J. F. 2005. Possible ecosystem impacts of applying MSY policies from single-species assessment. [ICES Journal of Marine Science](#), 62(3):558-568.
- Christensen, V., and J. Maclean, (Eds.) 2004. Placing fisheries in their ecosystem context. [Ecological Modelling](#) 172(2-4):102-438, (Special issue)
- Christensen, V. and C. J. Walters. 2004. Ecopath with Ecosim: methods, capabilities and limitations. [Ecol. Model.](#) 172:109-139
- Christensen, V. and C. J. Walters. 2004. Trade-offs in ecosystem-scale optimization of fisheries management policies. [Bull. Mar. Sci.](#) 74(3):549-562
- Kavanagh, P., N. Newlands, V. Christensen and D. Pauly. 2004. Automated parameter optimization for Ecopath ecosystem models. [Ecol. Model.](#) 172:141-149
- Shannon, L. J., Christensen, V., and Walters, C. 2004. Modelling stock dynamics in the southern Benguela ecosystem over the last twenty five years. [African Journal of Marine Science](#), 26: 179-196
- Christensen, V., Gu  nette, S., Heymans, J. J., Walters, C. J., Watson, R., Zeller, D. and Pauly, D. 2003. Hundred-year decline of North Atlantic predatory fishes. [Fish and Fisheries](#) 4: 1-24.
- Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2003. The future for fisheries. [Science](#), 302:1359-1361.
- Pauly, D., V. Christensen, S. Gu  nette, T.J. Pitcher, U.R. Sumaila, C.J. Walters, R. Watson and D. Zeller. 2002. Towards sustainability in world fisheries. [Nature](#) 418, 689 - 695.
- Beattie, A., Sumaila, U. R., Christensen, V., and Pauly, D. 2002. A model for the bioeconomic evaluation of marine protected area size and placement in the North Sea. [Natural Resource Modeling](#), 15(4):413-437.
- Christensen, V. 2000. Indicators for marine ecosystems impacted by fisheries. [Mar. Freshwater Res.](#) 51:447-450
- Pauly, D., V. Christensen, and C.J. Walters. 2000. Ecopath, Ecosim and Ecospace as tools for evaluating ecosystem impact of fisheries. [ICES J. of Marine Science](#) 57: 697-706
- Walters, C.J., J.F. Kitchell, V. Christensen and D. Pauly. 2000. Representing density dependent consequences of life history strategies in aquatic ecosystems: Ecosim II. [Ecosystems](#) 3: 70-83.
- Walters, C., D. Pauly and V. Christensen. 1999. Ecospace: prediction of mesoscale spatial patterns in trophic relationships of exploited ecosystems, with emphasis on the impacts of marine protected areas. [Ecosystems](#) 2: 539-554.
- Christensen, V. 1998. Fishery induced changes in a marine ecosystem: insights from models of the Gulf of Thailand. [Journal of Fish Biology](#) 53 (Supplement A): 128-142.
- Christensen, V. and D. Pauly. 1998. Changes in models of aquatic ecosystems approaching carrying capacity. [Ecological Applications](#), 8(1): S104-S109.
- Pauly, D., A. Trites, E. Capuli, and V. Christensen. 1998. Diet compositions and trophic levels of marine mammals. [ICES Journal of Marine Science](#), 53: 467-481.

- Pauly, D., R. Froese and V. Christensen. 1998. How pervasive is "fishing down marine food webs": response. [Science](#) 282 (5393): 1383a, 1998 November 20.
- Pauly, D., V. Christensen, A. Dalsgaard, R. Froese, and J. Torres. 1998. Fishing down marine food webs. [Science](#) 279 (5352): 860-863.
- Trites, A. D. Pauly and V. Christensen. 1997. Competition between fisheries and marine mammals for prey and primary production in the Pacific Ocean. *J. North West Atl. Fish. Sci.* 22: 173-187.
- Walters, C., V. Christensen and D. Pauly. 1997. Structuring dynamic models of exploited ecosystems from trophic mass-balance assessments. [Reviews in Fish Biology and Fisheries](#) 7:139-172.
- Christensen, V. 1996. Managing fisheries involving top predator and prey species components. [Reviews in Fish Biology and Fisheries](#). 6:417-442.
- Christensen, V. 1996. Virtual Population Reality. [Reviews in Fish Biology and Fisheries](#), 6: 243-247.
- Christensen, V. 1995. A model of trophic interactions in the North Sea in 1981, the Year of the Stomach. [Dana](#) 11(1):1-19.
- Christensen, V. 1995. Ecosystem maturity - towards quantification. [Ecol. Modelling](#). 77:3-32.
- Dalsgaard, J.P.T., C. Lightfoot, and V. Christensen. 1995. Towards quantification of ecological sustainability in farming systems analysis. *Ecol. Engineering*, 4: 181-189.
- Pauly, D., and V. Christensen. 1995. Primary production required to sustain global fisheries. [Nature](#): 374:255-257.
- Christensen, V. 1994. Emergy based ascendancy. [Ecol. Modelling](#). 72: 129-144.
- Christensen, V. 1994. On the behavior of some proposed goal functions for ecosystem development. [Ecol. Modelling](#). 75/76: 37-49
- Christensen, V. and D. Pauly. 1992. ECOPATH II - A software for balancing steady-state ecosystem models and calculating network characteristics. [Ecol. Modelling](#) 61:169-185.
- Munk, P. and V. Christensen. 1990. Larval growth and drift pattern and the separation of herring spawning groups in the North Sea. *J. Fish Biol.* 37:135-148.
- Munk, P., Kioerboe, T., and Christensen, V. 1989. Vertical migrations of herring, *Clupea harengus*, larvae in relation to light and prey distribution. *Environmental Biology of Fishes*, 26(2):87-96.
- Kioerboe, T., Munk, P., Richardson, K., Christensen, V., and Paulsen, H. 1988. Plankton dynamics and larval herring growth, drift and survival in a frontal area. *Marine Ecology Progress Series*, 44(3):205-219.
- Munk, P., Christensen, V., and Paulsen, H. 1986. Studies of a larval herring (*Clupea harengus* L.) patch in the Buchan area. 2. Growth, mortality and drift of larvae. *Dana*, 6:11-24

(b) *Conference Proceedings*

- Christensen, V., Amorim, P. A., Diallo, I., Diouf, T., Guénette, S., Heymans, J. J., Mendy, A. N., Ould Taleb Ould Sidi, M. M., Palomares, M. L. D., Samb, B., Stobberup, K. A., Vakily, J. M., Vasconcellos, M., Watson, R., and Pauly, D., 2004. [Trends in fish biomass off Northwest Africa, 1960-2000](#). In: *Marine Fisheries, Ecosystems, and Societies in West Africa: Half a Century of Change*. pp. 377-386, IRD, Paris
- Pitcher, T. J., Heymans, S. J. J., Ainsworth, C., Buchary, E. A., Sumaila, U. R., and Christensen, V., 2004. Opening the lost valley: implementing a 'Back to the Future' restoration policy for marine ecosystems and their fisheries. In: *Sustainable Management of North American Fisheries*. pp. 165-193, Ed. by E. E. Knudsen, D. D. MacDonald, and J. K. Muirhead, American Fisheries Society Symposium, Vol. 43.
- Jarre-Teichmann, A. and V. Christensen. 1998. Comparative modelling of trophic flows in four large upwelling ecosystems: global vs. local effects. P 423-443 in. Durand, M.-H., P. Cury, R. Mendelssohn, C. Roy, A. Bakun, and D. Pauly (eds.) *Global vs. Local Changes in Upwelling Ecosystems*. Proc. of the first CEOS symposium, 5-9 September 1994, Monterey, CA. Orstom, Paris.
- Pauly, D., F.C. Gayanilo, Jr., R. Froese and V. Christensen. 1995. Software tools for management of tropical aquatic resources. p. 90-102 in G.T. Sakagawa (ed.) *Assessment methodologies and management*. Proceedings of the World Fisheries Congress, Theme 5. Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- Christensen, V. and D. Pauly, eds. 1993. [Trophic models of aquatic ecosystems](#). ICLARM Conf. Proc. 26, 390 p. International Center for Living Aquatic Resources Management (ICLARM), Manila; International Council for the Exploration of the Seas (ICES), Copenhagen; and Danish International Development Assistance (DANIDA), Copenhagen.
- Christensen, V., and D. Pauly. 1993. [Flow characteristics of aquatic ecosystems](#), p. 338-352. In V. Christensen and D. Pauly (eds.) *Trophic models of aquatic ecosystems*. ICLARM Conf. Proc. 26, 390 p.

- Christensen, V. and D. Pauly. 1993. [On steady-state modelling of ecosystems](#), p. 14-19. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Moreau, J., V. Christensen and D. Pauly. 1993. [Analysis of African lakes](#) using a multispecies trophic model: the example of Lake George, Uganda, p. 124-129. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Ruddle, K. and V. Christensen. 1993. An energy flow model of the [mulberry dike-carp pond farming system](#) of the Zhujiang Delta, Guangdong Province, China, p. 48-55. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.
- Pauly, D. and V. Christensen. 1993. [Graphical representation](#) of steady-state trophic ecosystem models, p. 20-28. In V. Christensen and D. Pauly (eds.) Trophic models of aquatic ecosystems. ICLARM Conf. Proc. 26, 390 p.

(c) *Other*

- Watson, R., J. Alder, V. Christensen and D. Pauly. 2005. Mapping global fisheries patterns and their consequences. Part I,2 In: D.J. Wright and A. Scholz (eds). Place Matters – Geospatial Tools for Marine Science, Conservation and Management in the Pacific Northwest. Oregon State University Press, Corvallis. 272 pp.
- Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2003. The future for fisheries p. 29-36 In: D. Kennedy et al. (eds.) Science Magazine's State of the Planet, 2006-2007. AAAS, Washington, DC.
- Pauly, D., and V. Christensen. 2002. [Chapter 10: Ecosystem Models](#). p. 211-227 in P. Hart and J. Reynolds, editors. Handbook of Fish and Fisheries, vol. 2. Blackwell Science.
- Christensen, V. and D. Pauly. 2001. Coral reef and other tropical fisheries. p. 534-538 in J.H. Steele, S.A. Thorpe and K.K. Turekian (Editors). Encyclopedia of Ocean Sciences, Academic Press.

## 2. **NON-REFEREED PUBLICATIONS**

(a) *Journals*

- Cury, P. and V. Christensen. 2005. Quantitative ecosystem indicators for fisheries management: an introduction. ICES Journal of Marine Science, 62:307-310.
- Christensen, V. 2004. When South Africans swim together. Foreword to special issue "An ecosystem approach to fisheries management in the southern Benguela". African Journal of Marine Science, 26:i-ii
- Christensen, V. and D. Pauly. 2004. Placing fisheries in their ecosystem context, an introduction. Ecol. Model. 172:103-107

(b) *Conference Proceedings*

- Arias-González, J.E., Abarca, L.G., Alcocer-Durán, J., Cabrera, J.L., Caderón-Aguilera, L.E., Chiappa-Carrara, X., Christensen, V., Cupul-Magaña, A., Franco-López, J., Pérez-España, H., Morales-Zárate, V., Rodríguez-Zaragoza, F.A., Sansores, C. and Schmitter-Soto, J.J., 2009. Relationship between biodiversity and ecosystem functioning in Mexican aquatic systems. p. 76-78. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p,
- Brown, C.J., Fulton, E.A., Hobday, A.J., Matear, R., Possingham, H., Bulman, C., Christensen, V., Forrest, R., Gehrke, N., Gribble, N., Griffiths, S., Lozano-Montes, H., Martin, J., Metcalf, S., Okey, T., Watson, R. and Richardson, A.J., 2009. Ecological interactions within marine ecosystems determine winners and losers under climate change. p. 90-93. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Christensen, V., 2009. The future of Ecopath. p. 159-160. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Christensen, V., Lai, S. and Townsend, H., 2009. Chesapeake Bay fisheries ecosystem model: computer-generated graphics for creating a gaming experience with ecosystem data and management. P. 136 In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Cisneros-Montemayor, A.M., Christensen, V., Sumaila, U.R. and Arreguin-Sanchez, F., 2009. Fisheries in Baja California Sur: A trophic-based analysis of management scenarios. p. 29-30. In: M. Palomares et al. (Editor), Ecopath 25



- Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Coll, M., Piroddi, C., Palomera, I., Arneri, E. and Christensen, V., 2009. Main drivers of marine resources and food-web changes in the Mediterranean Sea. P. 148-150. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Espinosa, M., GREGG, E., Chan, K., 2009. Supporting ecosystem based management on the west coast of Vancouver Island. In: Palomares, M.L.D., Morissette, L., Cisneros-Montemayor, A., Varkey, D., Coll, M., Piroddi, C. (eds.), Ecopath 25 Years Conference Proceedings: Extended Abstracts, pp. 113-114. Fisheries Centre Research Reports 17(3). Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p
- Link, J.S., Pranovi, F., Coll, M., Libralato, S., Christensen, V. and Legault, C., 2009. Exploring novel metrics of ecosystem overfishing using energy budget model outputs. P. 153. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p
- Neira, S., Moloney, C., Cury, P.M., Mullon, C. and Christensen, V., 2009. Mechanisms affecting recovery in an upwelling food web: the case of the southern Humboldt. p 103-104. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Piroddi, C., Bearzi, G. and Christensen, V., 2009. Effects of local fisheries and ocean productivity on the Northeastern Ionian Sea ecosystem. P 39-40 In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Piroddi, C., Varkey, D., Morissette, L. and Christensen, V., 2009. Production and consumption in Ecopath models: A global overview. P. 145-147. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Poonsawat, R., Supongpan, M. and Christensen, V., 2009. Introducing ecosystem-based management in the Gulf of Thailand. P. 46. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Steenbeek, J. and Christensen, V., 2009. Using true GIS data with Ecospace. P. 143-144. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3), Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Villasante, S., García-Negro, M.C., Rodríguez Rodríguez, G., Christensen, V. and Sumaila, U.R., 2009. A preliminary trophic model of coastal fisheries resources of the Patagonian marine ecosystem. P. 151-152. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Wabnitz, C., Bjørndal, K.A., Bolten, A.B., Christensen, V. and Pauly, D., 2009. Restoration of *Chelonia mydas* population in the Caribbean: Ecosystem impacts resulting from reduction of seagrass habitat complexity. P. 122-123 In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Walters, C.J., Christensen, V. and Ahrens, R., 2009. Foraging arena theory. P. 20. In: M. Palomares et al. (Editor), Ecopath 25 Years Conference Proceedings: Extended Abstracts. Fisheries Centre Research Reports 17(3) Fisheries Centre, University of British Columbia [ISSN 1198-6727]. 167 p.
- Villanueva, M.C., V. Christensen, and P. Failler. 2008 Linking ecology, sociology and economics to determine the cost of aquatic environments. [Proceedings of the 5<sup>th</sup> World Fisheries Congress](#), Yokohama, Japan.
- Christensen, V., M.C. Villanueva, and K.A. Aiken. 2006. Ecosystems at risk: the contribution of ecosystem approaches to fisheries to identify problems and evaluate potential solutions. IIFET 2006: 475, 12 p.
- Guénette, Sylvie, Sheila J.J. Heymans, Villy Christensen, Andrew W. Trites. 2007. Ecosystem models of the Aleutian Islands and Southeast Alaska shows that Steller sea lions are impacted by killer whale predation when sea lion numbers are low. In: J.F. Piatt and S.M. Gende (eds.) Proceedings of the Fourth Glacier Bay Science Symposium, Oct 26-28, 2004 U.S. Geological Survey Scientific Report 2007-5047, p. 150-154.
- Nauen, C.E., V. Christensen, P. Failler, S. Opitz, S. Thatje 2006. Recovering fisheries from crisis or collapse: how to shorten impact time of international research cooperation. 13 pages. In: Proceedings of the Thirteenth Biennial

- Conference of the International Institute of Fisheries Economics & Trade, July 11-14, 2006, Portsmouth, UK: Rebuilding Fisheries in an Uncertain Environment.
- Christensen V. 2003. Using Ecopath with Ecosim for ecosystem based management of fisheries. In: H. Jákupsstovu (ed.) Workshop on Ecosystem Modelling of Faroese Waters, Tórshavn, September 2002, FRS / Faroese Fisheries Laboratory 2003: 73-75
- Christensen, Villy and Carl Walters. Ecopath with Ecosim: an overview. In: Proceedings of the INCO-DC Conference 'Placing Fisheries in their Ecosystem Context'. Galápagos Islands, Ecuador, 4-8 December 2000. Ed. V. Christensen, G. Reck and J.L. Maclean. Brussels: ACP-EU Fisheries Research Reports, (12): vii+79 p., 2002. 36 - 38.
- Christensen, Villy, Jan E. Beyer, Henrik Gislason and Morten Vinter. "A comparative analysis of the North Sea based on Ecopath with Ecosim and Multispecies Virtual Population Analysis". Proceedings of the INCO-DC Conference Placing Fisheries in their Ecosystem Context. Galápagos Islands, Ecuador, 4-8 December 2000. Ed. V. Christensen, G. Reck and J.L. Maclean. Brussels: ACP-EU Fisheries Research Reports, (12): vii+79 p., 2002. 39 - 39.
- Christensen, V., Garces, L., Silvestre, G. T., and Pauly, D. 2003. Fisheries impacts on the South China Sea large marine ecosystem. In: Silvestre, G., L. Garces, C. Luna, M. Ahmed, R. A. V. Santos, L. Lachica-Aliño, V. Christensen and D. Pauly, eds. 2003. Assessment and Management of Tropical Coastal Fisheries in Developing Asian Countries. ICLARM Conf. Proc. 67. 1120p.
- Christensen, V. 1999. Ecosystem modelling and the challenge of ecosystem-based management. p. 25-29 in Proceedings of the Expo '98 Conference on Ocean Food Webs and Economic Productivity, Lisbon, Portugal, 1-3 July 1998, Brussels, ACP-EU Fisheries Research Reports 5
- Christensen, V. 1998. Marine life at risk: biodiversity issues related to fisheries. In: Proceedings of the Conference on Biodiversity and Development, 21 October 1998, Eigtveds Pakhus, Copenhagen, Denmark. Macintosh, D. J. and Nielsen, T. (Eds.). Centre for Tropical Ecosystems Research, Aarhus University, Aarhus Denmark.
- Christensen, V. 1998. The new Ecopath with Ecosim. p. 9-10 in D. Pauly (Ed.) Use of Ecopath with Ecosim to Evaluate Strategies for Sustainable Exploitation of Multi-Species Resources. Fisheries Centre Research Reports, 6(2), 49p.
- Christensen, V. 1997. Productivity regulation and ecosystem variability, ecosystem exploitation: modelling results. Report from the international workshop "Ocean Harvest 97", Southampton Oceanographic Centre, U.K., June 1997.
- Christensen, V. and R. Mahon. 1997. Researchable issues relevant for management of large marine ecosystems, with special reference to the Caribbean. p. 79-100 in Anon, 1997. ACP-EU Fisheries Research Initiative. Proceedings of the Third Dialogue Meeting, Caribbean and Pacific and the European Union. Belize City, Belize, 5-10 December 1996. Brussels, ACP-EU Fish.Res. Rep., (3).

(c) *Other*

- ICES. 2010. Report of the Training Course: Ecosystem Modelling for Fisheries Management (TCMF2010), 8-12 March 2010, ICES Headquarters, Copenhagen. 20 pp
- Wieckowski, K.M., D.R. Marmorek, V. Christensen, D. Preikshot. 2010. Beaufort ERI: Integrated ecosystem modeling workshop proceedings (December 15 to 17, 2009). Prepared for Fisheries and Oceans Canada. Workshop proceedings prepared by ESSA Technologies Ltd., Vancouver, BC for the Arctic Aquatic Research Division, Fisheries and Oceans Canada, Winnipeg, Manitoba. XX p.
- Christensen, V., Lai, S., Pan, M., Felinto, D. and Townsend, H., 2009. Life in Chesapeake Bay: an animated documentary The Sea Around Us Newsletter, UBC Fisheries Centre, 53:1-2.
- Walters, C., and Christensen, V. 2009. Foraging arena theory. UBC Fisheries Centre Working Paper #2009-03. 18 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Walters, Carl, Villy Christensen, William Walters, Kenneth Rose. 2009. Representation of multi-stanza life histories in Ecospace models for spatial organization of ecosystem trophic interaction patterns. UBC Fisheries Centre Working Paper #2009-05. 23 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Christensen, V. 2008. Adding behavior to ecosystem modeling. UBC Fisheries Centre Working Paper #2008-02. 3 p. (Available at <http://www.fisheries.ubc.ca/publications/working/>).
- Christensen, V. 2008. Workshop observations. In Report of the National Ecosystem Modeling Workshop (NEMoW). Edited by H.M. Townsend, J.S. Link, K.E. Osgood, T. Gedamke, G.M. Watters, J.J. Polovina, P.S. Levin, N. Cyr and K.Y. Aydin. NOAA Technical Memorandum NMFS-F/SPO-87. p. 85.

- Christensen, V., Lai, S. 2008. Ecosystem models: Ecopath with Ecosim 6. P 52-58 in DFO National Workshop on Modelling Tools for Ecosystem Approaches to Management; 22-25 October 2007. DFO Can. Sci. Advis. Sec. Proceed. Ser. 2008/007.
- FAO, 2008. Fisheries management. 2. The ecosystem approach to fisheries. 2.1 Best practices in ecosystem modelling for informing an ecosystem approach to fisheries., FAO Fisheries Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2, Add. 1. Rome, FAO. 2008. 78p.
- Hongguang Ma, Howard Townsend, Villy Christensen. 2008. Fisheries Ecosystem Model of the Chesapeake Bay and its coupling with a hydrographic model. Poster presented at AFS Annual Meeting, Ottawa, Aug 17-21.
- Sherman, K., I. Belkin, V. Christensen, D. Pauly, S. Seitzinger, P. Hoagland, D. Jin, M.-C. Aquarone, and S. Adams. 2008. GEF International Waters Indicators for Developing a Global Benefits Index of Changing States of Large Marine Ecosystems. Working paper for GEF International Waters Indicators Review Workshop, 3-4 Dec. 2008, UNESCO, Paris, 74 p.
- Booth, S., Townsend, H., Christensen, V. 2007. Mercury in the Chesapeake. The Sea Around Us Project Newsletter 44: 1-2 (November-December)
- Christensen, Villy, Joe Buszowski, Robyn Forrest, Fang Gao, Carie Hoover, Joe Hui, Sherman Lai, Jeroen Steenbeek, William Walters and Carl Walters. 2007. All new Ecopath with Ecosim 6. PICES 16th Annual Meeting, Victoria BC, October 26-November 5, 2007, S3-4136 (poster, also presented at ICEM'06).
- Christensen, V., Lai, S. 2007. Ecopath with Ecosim 6: the sequel. The Sea Around Us Project Newsletter 43: 1-4 (September-October)
- Gascuel D., Christensen V., Pauly D. 2007. EcoTroph : modelling marine ecosystem functioning and impact of fishing. Abstract, 6th European Conference on Ecological Modelling - ECEM'07. Trieste, Italy, November 27-30, 2007
- Heymans, Sheila JJ, Sylvie Gu  nette, Villy Christensen. 2007. Network analysis indicators of ecosystem status in the Gulf of Alaska. ECEM'06, Trieste, Italy, November 27-30 (poster).
- Heymans, S (J. J.), Gu  nette, S., Christensen, V., and Trites, A. W. 2007. Steller sea lions in the Gulf of Alaska: Modelling effects of environmental variation and fishing. The Scottish Association for Marine Science Newsletter 33: 14.
- Li, L. R.H. Devlin, V. Christensen, and M. McAllister. 2007. Exploratory ecological risk assessment of transgenic coho using EwE. Report to Fisheries and Oceans Canada (DFO)
- Pauly, D., R. Watson and V. Christensen. 2007. Les r  serves marines: un rem  de efficace? Les Dossiers de la Recherche. No. 28 (August): 34-37.
- Piroddi, C., Christensen, V. 2007. An ecosystem-based approach to study two dolphin populations around the island of Kalamos, Ionian Sea, Greece. ECEM'06, Trieste, Italy, November 27-30 (poster).
- Christensen, V., Vincent, A., 2006. Thinking big calls for thanking big. FishBytes, UBC, 12(3):3
- Christensen, V. 2006. Turning the tide is easy enough. Sea Around Us Newsletter 33: 1-5 (January/February). UBC, Vancouver.
- Christensen, V., Booth, S. 2006. Ecosystem modelling of dioxin distribution patterns in the marine environment, p. 83-102. In: Alder, J. Pauly, D. (eds.) On the multiple uses of forage fish: from ecosystems to markets. Fisheries Centre Research Reports V(n). Fisheries Centre, University of British Columbia [ISSN 1198-6727].
- Christensen, V. and C.J. Walters. 2005. Using ecosystem modeling for fisheries management: where are we? [ICES CM/M:19](#).
- Gu  nette, S, Christensen, V. 2005. Fisheries, the environment, or what? An introduction. UBC Fisheries Centre Research Reports, Vol 13 (1): 7.
- Heymans, J.J., Gu  nette, S., Christensen, V. and Trites, A. 2005. Changes in the Gulf of Alaska ecosystems due to ocean climate change and fishing. ICES CM 2005/M:22.
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2005. Modelling and mapping resource overlap between marine mammals and fisheries on a global scale. In Institutskolloquium, February 2005, Forschungs- und Technologiezentrum B  sum, B  sum, Germany.
- Pauly, D., S. Booth, V. Christensen, W.L., Cheung, C. Close, A. Kitchingman, M.L.D. Palomares, R. Watson, and D. Zeller. 2005. On the exploitation of elasmobranchs, with emphasis on Cowtail stingray *Pastinachus sephen* (family Dasyatidae) Fisheries Centre Working Paper 2005-07, The University of British Columbia, Vancouver, B.C., Canada
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2004. Modelling and mapping resource overlap between marine mammals and fisheries on a global scale (SC/56/E31). Environmental Concerns Working Group, IWC Scientific Committee Meeting, Sorrento, Italy, 33 p.

- Christensen, V. and P. Cury. 2004. Paris by day: Symposium on "Quantitative ecosystem indicators for fisheries management". PICES Press 12(2):4-6.
- Gu  nette, S., J.J. Heymans, V. Christensen and A.W. Trites. 2004. Reconciling the decline of Steller sea lions with fisheries and ecosystem change in Alaska. Poster presented at the World Fisheries Congress, Vancouver, Canada, 2-6 May 2004.
- Kaschner, K., R. Watson, V. Christensen, A.W. Trites and D. Pauly. 2004. Modelling and mapping trophic overlap between marine mammals and fisheries on a global scale: implications for fisheries management. In 4th World Fisheries Congress, May 2-6, 2004, Vancouver, British Columbia, Canada.
- Libralato, S., V. Christensen and D. Pauly. 2004. Identification of keystone species from ecosystem models. Poster presented at the IOC/SCOR International Symposium on ecosystem indicators, Paris, 30 March – 3 April. ([www.ecosystemindicators.org/Posters/Libralato.pdf](http://www.ecosystemindicators.org/Posters/Libralato.pdf)).
- Preikshot, D., V. Christensen, R. Beamish and D. Pauly. 2004. An examination of ecosystem dynamics across different spatial scales reflected by climate and fisheries effects in North Pacific Oceanic ecosystems. Poster presented at the IOC/SCOR International Symposium on ecosystem indicators, Paris, 30 March – 3 April. (<http://www.ecosystemindicators.org/Posters/Preikshot.pdf>).
- Watson, R., J. Alder, S. Booth, V. Christensen, K. Kaschner, A. Kitchingman, S. Lai, M.L.D. Palomares, F. Valdez, D. Zeller and D. Pauly. 2004. Welcome to [www.seaaroundus.org](http://www.seaaroundus.org): launching our 'products' on the web. Sea Around Us Project Newsletter March/April (22): 1-8.
- Watson, R., J. Alder, V. Christensen and D. Pauly, D. 2004. Probing the depth: reverse engineering of fisheries statistics. Presented at the Symposium on 'Place matters: geospatial tools for marine science, conservation and management'. Description p. S20; abstract on attached CD-ROM. In: AAAS Annual Meeting, 12-16 February 2004, Seattle.
- Christensen, V., Garc  s, L. R., Silvestre, G. T., and Pauly, D., 2003. Fisheries impact on the South China Sea Large Marine Ecosystem: a preliminary analysis using spatially-explicit methodology. In: Assessment, Management and Future Directions for Coastal Fisheries in Asian Countries. pp. 51-62, Ed. by G. T. Silvestre, L. R. Garc  s, I. Stobutzki, M. Ahmed, R. A. Valmonte-Santos, C. Z. Luna, L. Lachica-Ali  o, P. Munro, V. Christensen, and D. Pauly, WorldFish Center Conference Proceedings 67,
- Christensen, V. 2003. Last week it was summer – confessions of an ecosystem traveler. FishBytes/Sea Around Us Newsletter, UBC, January-February 2003: 3-7.
- Christensen, V., R. Watson and D. Pauly. 2002. Falling fish catches since the 1970s. Map insert In: 'A World Transformed.' National Geographic, Washington, D.C.
- Christensen, V., S. Gu  nette, J. J. Heymans, C. J. Walters, R. Watson, D. Zeller, and D. Pauly. 2002. Estimating fish abundance of the North Atlantic, 1950 to 1999. in S. Gu  nette, V. Christensen, and D. Pauly, editors. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9(4): 1-25.
- Dommasnes, A., V. Christensen, B. Ellertsen, C. Kvamme, W. Melle, L. Nottestad, T. Pedersen, S. Tjelmeland, and D. Zeller. 2002. Ecosystem model for the Norwegian Sea and Barents Sea. in S. Gu  nette, V. Christensen, and D. Pauly, editors. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. Fisheries Centre Research Reports 9(4):213-240.
- Pauly, D., Watson, R. and Christensen, V. 2002. Quand le poisson vient    manquer. La Recherche. July-August 355:80-83
- Walters, C. J., Christensen, V. and Pauly, D. 2002. Searching for optimum fishing strategies for fisheries development, recovery and sustainability In: The use of ecosystems models to investigate multispecies management strategies for capture fisheries (eds Pitcher, T. J. and Cochrane, K.) Fisheries Centre Research Reports 10(2), 156 pp, pp. 11-15.
- Kaschner, K., R. Watson, V. Christensen, A. W. Trites, and D. Pauly. 2002. Modeling and mapping trophic overlap between marine mammals and commercial fisheries in the North Atlantic. p. 35-45 in D. Zeller, R. Watson, T. Pitcher, and D. Pauly, editors. Fisheries impact on North Atlantic ecosystems: catch, effort and national/regional ecosystems. Fisheries Centre Research Report 9(3).
- Walters, C. J., V. Christensen, and D. Pauly. 2002. Searching for optimum fishing strategies for fisheries development, recovery and sustainability. Pages 11-15 in T. J. Pitcher and K. Cochrane, editors. The use of ecosystems models to investigate multispecies management strategies for capture fisheries. Fisheries Centre Research Reports 10(2), 156 pp.



- Beattie, A., V. Christensen, U. R. Sumaila, and D. Pauly. 2001. Marine protected areas in the North Sea: a preliminary bioeconomic evaluation using Ecosim, a new game theory tool for use with the ecosystem simulation Ecopath with Ecosim. in U. R. Sumaila and J. Alder, editors. Economics of marine protected areas. Fisheries Centre Research Reports 9(8), UBC, Vancouver.
- Cury, P. and V. Christensen. 2001. SCOR/IOC Working Group 119: 'Quantitative Ecosystem Indicators for Fisheries Management'. ICES C.M. 2001/T:02.
- Christensen, V. and C.J. Walters. 2000. Ecopath with Ecosim: methods, capabilities and limitations. pp. 79-105, In: Pauly, D. and T.J. Pitcher (eds.) Methods for assessing the impact of fisheries on marine ecosystems of the North Atlantic. Fish. Centre Res. Rep. 8(2): 195 p.
- Pauly, D., R. Watson, D. Zeller, and V. Christensen. 2000. Ecosystems of the North Atlantic: some definitions. The Sea Around Us Project Newsletter 2:1-4.
- Pauly, D., Christensen, V., Froese, R., Longhurst, A., Platt, T., Sathyendranath, S., Sherman, K., and Watson, R. 2000. Mapping fisheries onto marine ecosystems: a consensus approach for regional, oceanic and global integration. ICES CM 2000/T:14. 16 p.
- Pauly, Daniel, Villy Christensen, R. Froese, A. Longhurst, T. Platt, S. Sathyendranath, K. Sherman and R. Watson. 2000. Mapping fisheries onto marine ecosystems: a proposal for a consensus approach for regional, oceanic and global integration. Methods for evaluating the impacts of fisheries on North Atlantic ecosystems. Ed. Daniel Pauly and T.J. Pitcher. Fisheries Centre Research Reports 8(2).
- Pauly, D., V. Christensen, R. Froese and M. L. Palomares. 2000. Fishing down aquatic food webs. American Scientist. 88.1 (2000): 46 - 51.
- Supongpan, M., Christensen, V., Walters, C. and Pitcher, T., 2000. The use of ecosystem models to investigate multi-species management strategies for capture fisheries in the Gulf of Thailand. A paper presented for the Workshop on the Use of Ecosystem Models to Investigate Multi-species Management Strategies for Capture Fisheries held by FAO/UBC, Canada.
- Walters, C. D. Pauly and V. Christensen 1999. Ecospace: prediction of mesoscale spatial patterns in trophic relationships of exploited ecosystems, with emphasis on the impacts of marine protected areas. International Council for the Exploration of the Sea, ICES C.M. 1998/S:4, 20 p.
- Christensen, V., and D. Pauly. 1998. The Ecopath approach and software. Pp. 8-11 in Okey, T.A., and D. Pauly. Trophic Mass-Balance Model of Alaska's Prince William Sound Ecosystem, for the Post-Spill Period 1994-1996. Fisheries Centre Reports 6 (4), 144 p. University of British Columbia, Vancouver, B.C., Canada
- Christensen, V. and D. Pauly. 1997. Placing fisheries resources in their ecosystem context. EC Fisheries Cooperation Bulletin, 10(2): 9-14 (English and French).
- Pauly, D. and V. Christensen. 1997. The Ecopath modeling approach and FishBase. Box 14, p. 124 In R. Froese and D. Pauly (eds.) FishBase 97: concepts, design and data sources. ICLARM, Manila.
- Pauly, D. and V. Christensen. 1997. Trophic levels of fishes. Box 16, p. 127 In R. Froese and D. Pauly (eds.) FishBase 97: concepts, design and data sources. ICLARM, Manila.
- Christensen, V. 1996. Sky-skraenter (Thermal convergence, in Danish). Flyv 6: 8-11.
- Christensen, V. 1996. Balancing the Alaska gyre model. p. 32-36 In: D. Pauly and V. Christensen (eds.) Mass-Balance Models of North-Eastern Pacific Ecosystems. Fisheries Centre Research Reports 4(1).
- Christensen, V. and D. Pauly. 1996. Ecological modeling for all. Naga, the ICLARM Quarterly 19 (2):25-26.
- Christensen, V. and D. Pauly. 1996. Marine ecosystem management: [an ode to Odum](#). Presented at the International Workshop on Ecosystem Management for Sustainable Marine Fisheries, Monterey, California, 19-24 Feb 1996.
- Pauly, D. and V. Christensen. 1996. ECOPATH models of coral reef ecosystems. P. 137-144 in J.W. McManus and M.C. Ablan (eds.). ReefBase, a global database on coral reefs and their resources. ICLARM.
- Pauly, D. and V. Christensen. 1996. Rationale for mass-balance (trophic) models, p. 12-15. In: Mass-balance models of North-eastern Pacific ecosystems. Fisheries Centre Res. Rep. 4(1)
- Pauly, D. and V. Christensen. 1996. Rehabilitating fished ecosystems: insights from the past. Naga, the ICLARM Quarterly 19(3):13-14
- Polovina, J.J., J. Purcell, M. Arai, A. Jarre-Teichmann, L. Huato, P. Livingston, A. Trites, K. Heise, J. Kelson, Y. Wada, S. Speckman and V. Christensen. 1996. Alaska Gyre model. p. 16-36. In: Mass-balance models of North-eastern Pacific ecosystems. Fisheries Centre Res. Rep. 4(1)
- Christensen, V. 1995. A multispecies virtual population analysis incorporating information of size and age. ICES C.M. 1995/D:8.

- Christensen, V. and D. Pauly. 1995. Fish production, catches and the carrying capacity of the world oceans. *Naga, the ICLARM Quarterly* 18(3):34-40.
- Pauly, D. and V. Christensen. 1995. Coral reef systems and their exploitation: toward a global account. *Reef Encounters* 18:6-7.
- Pauly, D., A. Trites, E. Capuli and V. Christensen. 1995. Diet composition and trophic levels of marine mammals. *ICES C.M.* 1995/N: 13. 22 p.
- Christensen, V. 1994. Assessing trophic impacts of fish stock enhancement. Appendix to report of the ICES Workshop to evaluate the potential of stock enhancement, as an approach to fisheries management. Copenhagen, 19-24 May, 1994. *ICES C.M.* 1994/F:9.
- Christensen, V. 1994. In our experience: a review of "Quantitative Fisheries Stock Assessment". *Naga, the ICLARM Quarterly*, 17(1): 55-56.
- Pauly, D. and V. Christensen. 1994. Modeling coral reef ecosystems. p. 58-60. in J.L. Munro and P.E. Munro, (eds.) *The management of coral reef resource systems*. ICLARM Conf. Proc. 44, 124 p.
- Christensen, V. and J.F. Caddy. 1993. Reflections on the pelagic food web structure in the Black Sea. Paper presented at the General Fisheries Council for the Mediterranean Technical Consultation on Stock Assessment in the Black Sea, 15-19 February 1993, Ankara, Turkey.
- Bakun, A., V. Christensen, C. Curtis, P. Cury, M.H. Durand, D. Husby, R. Mendelssohn, J. Mendo, R. Parrish, D. Pauly and C. Roy. 1992. The Climate and Eastern Ocean Systems Project. *Naga, the ICLARM Quarterly* 15(4):26-30.
- Christensen, V. 1992. Network analysis of trophic interactions in aquatic ecosystems. Royal Danish School of Pharmacy, Copenhagen, Denmark. Ph.D. thesis. 55 p + Appendices.
- Christensen, V. 1992. On Gulland and Rosenberg (1992), a review. *Naga, the ICLARM Quarterly* 15(4):54-55.
- Christensen, V. 1992. Two new books on fish ecology from Chapman and Hall. Book review. *Naga, the ICLARM Quarterly* 15(1):50-51.
- Christensen, V. and D. Pauly. 1992. A guide to the ECOPATH II program (version 2.1). ICLARM Software 6, 72 p. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1992. ECOPATH II - An approach and a software for construction of ecosystem models and food web analysis. *ICES C.M.* 1992/L:30. (Poster).
- Christensen, V. and D. Pauly. 1992. Guide du logiciel ECOPATH II (version 2.1). ICLARM Software 6, 120 p. Adaptation française Jacques Moreau, avec l'assistance de C. Lhomme-Binudin. Centre international de gestion des ressources vivantes aquatiques (ICLARM), Manille, Philippines.
- Christensen, V. and D. Pauly. 1992. Una guía al ECOPATH II sistema de software (version 2.1). Traducido por Matthias Wolff. ZMT Contributions 1. Centro de Ecología Marina Tropical (ZMT), Bremen, Alemania, y Centro internacional de Manejo de recursos vivos acuáticos (ICLARM), Manila, Filipinas.
- Christensen, V. 1991. On ECOPATH, Fishbyte and fisheries management. *Fishbyte* 9(2):62-66.
- Christensen, V. and D. Pauly. 1991. A guide to the ECOPATH II program (version 2.0). International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1991. The South China Sea: analyzing fisheries catch data in an ecosystem context. *Naga, the ICLARM Quarterly* 14(4):7-9.
- Christensen, V., A. Trinidad-Cruz, J. Paw, J. Torres and D. Pauly. 1991. Appendix 6. Catch and potential of major fisheries resource systems in tropical and subtropical areas. p. 13-43. In: *A strategic plan for international fisheries research*. Appendixes. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. 1990. The ECOPATH II software or how can we gain from working together. *Naga, the ICLARM Quarterly*, 13(2):9-10.
- Christensen, V. and D. Pauly. 1990. A draft guide to the ECOPATH II program (version 1.0). ICLARM Software 6, 22 p. International Center for Living Aquatic Resources Management, Manila, Philippines.
- Christensen, V. and D. Pauly. 1990. Global comparisons of aquatic ecosystems. *ICES C.M.* 1990/L:69. 7 p.
- Christensen, V. and D. Pauly. 1990. The ECOPATH II model. *ICES C.M.* 1990/L:68. 6 p.
- Degnbol, P., V. Christensen, J.G. Støttrup, H. Paulsen and K.J. Staehr. 1990. Experimental estimation of food preference in cod - results of a pilot experiment. *ICES C.M.* 1990/G:63. 7 p.
- Pauly, D. and V. Christensen. 1990. Three new approaches for the graphical representation of steady-state trophic ecosystem models. *ICES C.M.* 1990/L:67. 6 p.

- Pauly, D., V. Christensen and V. Sambily, Jr. 1990. Some features of fish food consumption estimates used by ecosystem modelers. ICES C.M. 1990/G:17. 8 p.
- Christensen, V., 1989. HECAS a working group catch statistics spreadsheet package. ICES, ICES CM1989/D:19.
- Christensen, V., and Munk, P., 1989. Estimation of larval growth rates from herring larvae surveys. ICES, ICES CM1989/H:45.
- Christensen, V., Nielsen, T., and Paulsen, H., 1988. Sampling of herring larvae close to a drifting buoy. ICES, ICES CM1988/H:47.
- Richardson, K., Paulsen, H., Munk, P., Kiorboe, T., Christensen, V., and Nyhammer, S., 1986. Herring larvae distribution, plankton production and hydrography in the Buchan area (Scotland) in September-October, 1985. ICES, ICES CM1986/L:32.
- Christensen, V., and Lassen, H., 1986. Estimating average length composition from the International Herring Larvae Survey data. ICES, ICES CM 1986/H:67.
- Christensen, V., Heath, M., Kiorboe, T., Munk, P., Paulsen, H., and Richardson, K., 1985. Investigations on the relationship of herring larvae, plankton production and hydrography at Aberdeen Bank, Buchan Area, September 1984. ICES C.M. 1985/L:23
- Christensen, V., 1985. Estimation of herring larval production. ICES, ICES CM 1985/H:60.
- Beyer, J. E., E.B. Christensen, V. Christensen, T. Kiorboe, P. Munk, H. Paulsen and K. Richardson., 1985. Summary of Danish enclosure experiments. ICES CM. 1985/Mini Symp. 7. 7 p.
- Christensen, V., Dahl, E. D., D.S. Hundahl, H., Kiorboe, T., and Kullenberg, G. 1983. A combined fish larval, phytoplankton and oceanographic survey in the Skagerrak and the Kattegat in April 1983. ICES CM 1983/L:26. 8 p.
- Christensen, V. 1983. Predation by sand eel on herring larvae. ICES CM. 1983/L:27. 10 p.

### 3. **BOOKS AND REPORTS**

#### *(a) Authored*

- Anon. 2010. Sector-based options to reduce global biodiversity loss. A quantitative analysis. A contribution to the project on The Economics of Ecosystems and Biodiversity (TEEB). Netherlands Environmental Assessment Agency (PBL), Agricultural Economics Research Institute (WUR-LEI), Fisheries Centre (Sea Around Us Project), UBC. (Contributing author)
- K. Sherman, D. Pauly, V. Christensen, R. Sumaila, J. O'Reilly, K. Hyde, I. Belkin, S. Seitzinger, J. Sutinen, S. Olsen, T. Hennessey, L. Juda, P. Hoagland, D. Jin, M. Aquarone, S. Adams. 2010. Methodology for assessing changing conditions of the world's large marine ecosystems. Report to the GEF Transboundary Water Assessment Program.
- Christensen, Villy, Alasdair Beattie, Claire Buchanan, Hongguang Ma, Steven J. D. Martell, Robert J. Latour, Dave Preikshot, Madeline B. Sigrist, James H. Uphoff, Carl J. Walters, Robert J. Wood, and Howard Townsend. 2009. Fisheries Ecosystem Model of the Chesapeake Bay: Methodology, Parameterization, and Model Explanation. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO- 106, 146 p.
- Ma, H., H. Townsend, M. Sigrist, V. Christensen, C. Walters, J. Buszowski, J. Korman, and D. Preikshot. 2009. Constructing Historical Long-Term Primary Production in the Chesapeake Bay for Use in Ecosystem-Based Fisheries Management Models. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO-105, 51 p.
- Christensen, V., Walters, C.J., Ahrens, R., Alder, J., Buszowski, J., Christensen, L.B., Cheung, W.W.L., Dunne, J., Froese, R., Karpouzi, V., Kastner, K., Kearney, K., Lai, S., Lam, V., Palomares, M.L.D., Peters-Mason, A., Piroddi, C., Sarmiento, J.L., Steenbeek, J., Sumaila, R., Watson, R., Zeller, D. and Pauly, D., 2008. Models of the world's large marine ecosystems. GEF/LME global project Promoting Ecosystem-based Approaches to Fisheries Conservation and Large Marine Ecosystems. Intergovernmental Oceanographic Commissions Technical Series No. 80, iv+43p. UNESCO.
- Dalsgaard, A.J., Christensen, V., Nicolajsen, H., Koed, A., Støttrup, J., Groos, J., Bregnballe, T., Sørensen, H.L., Christensen, J.T., and Nielsen, R. 2008. Økosystemmodel for Ringkøbing Fjord. Skarvbestandens påvirkning af fiskebestandene, DTU Aqua-rapport nr. 178-08, DTU Aqua, Copenhagen.
- Alder, J., Guénette, S., Beblow, J., Cheung, W., and Christensen, V. 2007. Ecosystem-based global fishing policy scenarios, Fisheries Centre Research Report 15(7), University of British Columbia, Vancouver. 91 p.

Guénette, S., Christensen, V., Hoover, C., Lam, M. E., Preikshot, D., and Pauly, D., 2007. A synthesis of research activities at the Fisheries Centre on ecosystem-based fisheries modelling and assessment with emphasis on the Northern and Central Coast of BC. [FCRR 2007, Vol. 15\(1\)](#) 32 pp

Pauly, D., Froese, R., Sa-a, P., Palomares, M., Christensen, V. and Rius, J., 2000. TrophLab manual. ICLARM, Manila, Philippines.

*(b) Edited*

Christensen, V., J.L. Maclean (Eds.) In press. Ecosystem Approaches to Fisheries: A Global Perspective. Cambridge University Press.

Christensen, V, C.J. Walters and D. Pauly. 2005. Ecopath with Ecosim: a User's Guide, November 2005 Edition. Fisheries Centre, University of British Columbia, Vancouver, Canada. 154 p.

Guénette, S., and V. Christensen (editors). 2005. Food web models and data for studying fisheries and environmental impacts on Eastern Pacific ecosystems. [Fisheries Centre Research Reports 13\(1\)](#): 237 pp.

Christensen, V, C.J. Walters and D. Pauly. 2004. Ecopath with Ecosim: a User's Guide, May 2004 Edition. Fisheries Centre, University of British Columbia, Vancouver, Canada. 154 p.

Silvestre, G., L. Garces, C. Luna, M. Ahmed, R. A. V. Santos, L. Lachica-Aliño, P. Munro, V. Christensen and D. Pauly, eds. 2003. Assessment and Management of Tropical Coastal Fisheries in Developing Asian Countries. ICLARM Conf. Proc. 67. 1120 p.

Christensen, V., Reck, G. and Maclean, J. L., eds. 2002. Proceedings of the INCO-DC Conference Placing Fisheries in their Ecosystem Context. Galápagos Islands, Ecuador, 4-8 December 2000, ACP-EU Fisheries Research Reports, (12), 79 p., Brussels.

Guénette, S., Christensen, V., and Pauly, D., eds., 2002. Fisheries Impacts on North Atlantic Ecosystems: Models and Analyses. [Fisheries Centre Research Reports 9\(4\)](#), 344 pp.

Pauly, D. V. Christensen and L. Coelho, eds. 1999. Ocean food webs and economic productivity. Proceedings of the EXPO 98 Conference, Lisbon, Portugal, 1-3 July 1998. ACP-EU Fish. Res. Rep., (5): 87 p., Brussels

Pauly, D. and V. Christensen, eds. 1996. Mass-Balance Models of Northeastern Pacific Ecosystems. [Fisheries Centre Research Reports, 4\(1\)](#). University of British Columbia. 131 p.

*(c) Chapters*

Christensen, V. In press. Toward ecosystem-based management of fisheries. (in Christensen and Maclean, Editors)

Christensen, V, and Lai, S. In press. Scenario development for decision making (in Christensen and Maclean, Editors)

Christensen and Maclean, Editors).

Stergiou, KI and V Christensen. In press. Fishing down food webs. (in Christensen and Maclean, Editors)

Heymans, J.J., Coll, M., Libralletto, S., and Christensen, V. Ecopath theory, modeling and application to coastal ecosystems. Chapter 9.5 in Bard, D., and Mehta, M. (Editors). "Estuarine and Coastal Ecosystems Modeling" of the Elsevier Science Series "Estuarine and Coastal Science", Elsevier Science Publishers, Amsterdam, (in press).

Christensen, V., and Cury, P. 2010. Using ecological indicators to assess the health of marine ecosystems: the North Atlantic. Chapter 14 in: S. E. Jørgensen, R. Costanza, and F.-L. Xu (Editors). CRC Handbook on Indicators of Ecosystem Health, 2<sup>nd</sup> Edition. CRC, Lewis Publishers (in press)

Christensen, V. 2009. Ecopath with Ecosim: Linking fisheries and ecology. Page 55-70. Chapter 5 in: S. E. Jørgensen, T-S Chon, F.A. Recknagel (Editors) Handbook of Ecological Modelling and Informatics. WIT Press

Pauly, D., J. Alder, S. Booth, W.W.L. Cheung, V. Christensen, C. Close, U.R. Sumaila, W. Swartz, A. Tavakolie, R. Watson, L. Wood and D. Zeller. 2008. Fisheries in Large Marine Ecosystems: Descriptions and Diagnoses. p. 23-40. In: K. Sherman and G. Hempel (eds.) The UNEP Large Marine Ecosystem Report: a Perspective on Changing Conditions in LMEs of the World's Regional Seas. UNEP Regional Seas Reports and Studies No. 182.

Pauly, D., J. Alder, E. Bennett, V. Christensen, P. Tyedmers and R. Watson. 2006. El futuro de las pesquerías. p. 339-345 and 402-403 In: P. Trillo (ed.) Libro del Centenario de Chimbote, Yan Producciones, Lima, Peru. [Authorized translation of 'The future for fisheries' (Science 302: 1359-1361)].

Trites, A.W., V. Christensen and D. Pauly. 2006. Effects of fisheries on ecosystems: just another top predator? In: Top Predators in Marine Ecosystems. I.L. Boyd, S. Wanless, and C.J. Camphuysen (Eds.). pp. 11-27. Cambridge University Press, Cambridge

Alcamo, J. et al. 2005. Changes in ecosystem services and their drivers across the scenarios. Chapter 9 in Ecosystems and Human Well-being: Volume 2. Scenarios. Millenium Ecosystem Assessment. (lead author)

- Pauly, D. et al. 2005. Marine fisheries systems. Chapter 18 in Ecosystems and Human Well-Being: Volume 1. Current State and Trends. Millenium Ecosystem Assessment. (contributing author)
- Christensen, V., and Cury, P., 2005. Chapter 8. Application of ecological indicators for assessing health of marine ecosystems. In: CRC Handbook on Indicators of Ecosystem Health. pp. 193-212, Ed. by S. E. Jorgensen, R. Costanza, and F.-L. Xu, CRC, Lewis Publishers
- Pauly, D., Watson, R., and Christensen, V., 2003. Ecological geography as a framework for a transition toward responsible fishing. p. 87-101 in: Responsible Fisheries in the Marine Ecosystem. Ed. by M. Sinclair and G. Valdimarsson, CAB International
- Watson, R., D. Pauly., V. Christensen, R. Froese, A. Longhurst, T. Platt, S. Sathyendranath, K. Sherman, J. O'Reilly, and P. Celone. 2003. Mapping fisheries onto marine ecosystems for regional, oceanic and global integrations. In: G. Hempel and K. Sherman (Eds.), Trends in Exploitation, Protection, and Research. Elsevier Science, Amsterdam. 12:375-395.
- Pauly, D., F. Arreguín-Sánchez, J. Browder, V. Christensen, S. Manickchand-Heileman, E. Martínez and L. Vidal. 1999. Towards a stratified mass-balance model of trophic fluxes in the Gulf of Mexico Large marine ecosystem. p. 278-293. In: H. Kumpf and K. Sherman, eds. The Gulf of Mexico Large Marine ecosystem. Blackwell Science. USA.
- Dalsgaard, J.P.T. and V. Christensen. 1997. Flow modelling with ECOPATH: providing insights on the ecological state of agroecosystems. P. 203-212 in P.S. Teng, M.J. Kropff, H.F.M. ten Berge, J.B. Dent, F.B. Lansigan and H.H van Laar, eds. Applications of Systems Approaches at the Farm and Regional Level. Kluwer Academic Publishers, 466 p.
- Pauly, D. and V. Christensen. 1993. Stratified models of large marine ecosystems: a general approach and an application to the South China Sea, p. 148-174. In K. Sherman, L.M. Alexander and B.D. Gold, eds. Large marine ecosystems: stress, mitigation and sustainability. AAAS Press (American Association for the Advancement of Science Publishing Division), Washington, DC. 376 p.

#### 4. **PATENTS**

#### 5. **SPECIAL COPYRIGHTS**

#### 6. **ARTISTIC WORKS, PERFORMANCES, DESIGNS**

#### 7. **OTHER WORKS**

- 2009: "Life in Chesapeake Bay", a 7-minute video, describing ecosystem changes developed with the Blender 3D gaming engine; director, producer, and scriptwriter. [Released July 2009; <http://ecopath.org/LifeInTheChesapeakeBay/>]
- 2007: Ecopath with Ecosim, Version 6 (with updates released monthly since then)
- 2004: Ecopath with Ecosim, Version 5.1
- 2003: Ecopath with Ecosim, Version 5.
- 2000: Ecopath with Ecosim, Version 4.
- 1996: ECOPATH, Version 3.0 for Windows, ICLARM Software 6.
- 1990-1994: ECOPATH scientific ecosystem modeling software, Versions 1.0, 2.0, 2.1 and 2.2. ICLARM Software 6
- 1988: HECAS, Herring Catch Statistics software, Developed for the ICES Herring Assessment Working Group.

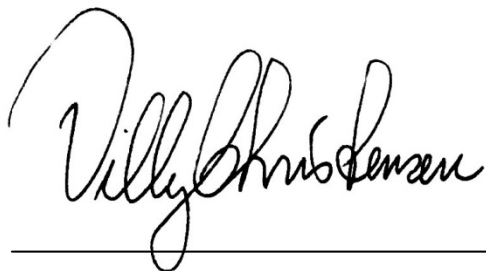
#### 8. **WORK SUBMITTED (including publisher and date of submission)**

- Christensen, V., J. Steenbeek, P. Failler. A combined ecosystem modeling and value chain approach. (Submitted to Ecological Modelling, June 2010)
- Melnichuk, Michael C., Jerald S. Ault, Villy Christensen, Nicholas A. Farmer, Frederick A. Goetz, Michael Hayes, Christopher Lowe, Bill Pine, Reg Reisenbichler, Steve Rubin, Darin Topping, Carl J. Walters. Cross study assessment of variation in detection ranges and efficiencies in mobile tracking surveys of acoustic tags. Chapter submitted for 'Improving Fish and Biological Population Monitoring through the Use of TTM Remote Sensing Techniques. The Pacific Northwest Aquatic Monitoring Partnership. (Accepted for consideration, Sep 2008)
- Morissette, L., Christensen, V. and Pauly, D., MS. Marine mammal impacts in exploited ecosystems: would large-scale culling benefit the fishery. (Submitted to Ecological Applications, Dec 2009)
- Poonsawat, R., M. Supongpan, V. Christensen. Ecosystem-based management in the Gulf of Thailand. (Fisheries Research, submitted, June 2010)

Wabnitz, C., Christensen, V., Balazs, G., Bjorndal, K, Bolten, A., and Pauly, D. Baseline trophic relationships in Kaloko Honokōhau, Hawai'i. (submitted, Dec 2009)

#### 9. **WORK IN PROGRESS** (including degree of completion)

- Christensen, V., C.J. Walters. Fitting ecosystem models to time series data. (MS, for submission to Ecological Modeling)
- Cisneros-Montemayor, A.M., Christensen, V., Arreguín-Sánchez, F., Sumaila, U.R., Fisheries in Baja California Sur: Incorporating trophic relationships in management scenarios (Draft completed, expected submission Feb 2010)
- Coombs, Andrea P., Andrew W. Trites, Villy Christensen, Daniel Pauly. (MS) Assessing impacts of PCB contamination on marine mammals and human health in the eastern Bering Sea (being prepared for re-submission to journal)
- Coll, Marta, Lynne J. Shannon, Cameron Ainsworth, Villy Christensen, Sheila J. Heymans, Steve Mackinson, Sergio Neira, Kate Watermeyer. Consequences of depletion and recovery for marine ecosystem functioning, Augustina Anyanwu, Villy Christensen, & Rashid Sumaila (Eds). Fisheries of the Guinea Current Large Marine Ecosystem. Elsevier, Large Marine Ecosystems Series. (Edited volume; most chapters in hand, Dec. 2009)
- Ferdaña, Zach, Villy Christensen, Jeroen Steenbeek, Sherman Lai. Comparing spatial optimization routines: multiple objective planning in marine biodiversity conservation and fisheries.
- Heymans, J. J., Guénette, S., Christensen, V., and Trites, A. W. Fishing and environmental variation effects on the dynamics of the Aleutian Islands and Southeast Alaska in the North Pacific Ocean. (completed, ready for submission)
- Melnychuk, M.C., Walters, C.J., Christensen, V., Bothwell, M.L., and Welch, D.W. Effects of solar ultraviolet radiation exposure on early ocean survival and fry-to-smolt growth of juvenile coho and sockeye salmon. (MS ready for submission)
- Melnychuk, M.C., Welch, D.W., Christensen, V., and Walters, C.J. Spatial and temporal migration behaviour of salmon smolts. (MS ready for submission).
- Melnychuk, M., Welch, D., Walters, C. J., Christensen, V. and Zeller, D. Juvenile marine mortality and early ocean migration patterns of coho salmon (*Oncorhynchus kisutch*) in Howe Sound, British Columbia. (MS completed)
- Poonsawat, R., M. Supongpan, V. Christensen. Trophic levels of multi-species fisheries in the Gulf of Thailand. (MS, first draft completed, Dec 2009)




---

July 19, 2010